

ENTERED

March 31, 2022

Nathan Ochsner, Clerk

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
BROWNSVILLE DIVISION

CONSOLIDATED

PARAGON ASSET COMPANY LTD, AS OWNER OF THE DRILLSHIP DPDS1,	§	
V.	§	CIVIL ACTION NO. 1:17-CV-203
GULF COPPER & MANUFACTURING CORPORATION, <i>et al.</i> ,	§	

SIGNET MARITIME CORPORATION, AS OWNER OF THE TUG SIGNET ENTERPRISE, ITS ENGINES, TACKLE, ETC., IN A CAUSE OF EXONERATION FROM OR LIMITATION OF LIABILITY,	§	
	§	CIVIL ACTION NO. 1:17-CV-247
	§	

SIGNET MARITIME CORPORATION, AS OWNER OF THE TUG SIGNET ARCTURUS, ITS ENGINES, TACKLE, ETC., IN A CAUSE OF EXONERATION FROM OR LIMITATION OF LIABILITY,	§	
	§	CIVIL ACTION NO. 1:18-CV-035
	§	

ORDER AND OPINION

On August 25, 2017, Hurricane Harvey made landfall near Corpus Christi as a Category 4 hurricane. In nearby Port Aransas, the drillship DPDS1 lay docked, with no crew, but with two tug boats alongside to help keep her in place during the storm. Shortly before 11:00 p.m., the DPDS1 broke free from her moorings. The drillship immediately propelled the two tug boats into adjacent semisubmersible oil rigs, damaging those vessels and sinking one tug boat and impairing the other. The DPDS1 itself moved into and grounded in the ship channel, but refloated three days later, traveling across the channel and alliding with and damaging a research pier. The alleged damages total well over \$10,000,000.

Three Complaints in Limitation ensued, filed by the respective owners of the DPDS1 (Paragon) and the two tug boats (Signet). Each party filed counterclaims, and the owner of the semisubmersible oil rigs (Noble) and the research pier (The University of Texas) filed claims for the damage to their property. Gulf Copper, which owned the pier to which the DPDS1 had been docked, also filed a claim for damage to that pier. And Paragon made claims against Signet's insurer, American Club.¹

The parties completed extensive discovery and motion practice, and in the process settled the claims that Noble, the University of Texas, and Gulf Copper filed. In July and August of 2021, the Court held a five-day bench trial on the claims remaining between Paragon, Signet, and American Club. At trial, 19 witnesses testified, and the Court admitted over 1,200 exhibits.²

In this Order and Opinion, based on the voluminous trial record and the applicable law, the Court renders its findings of fact and conclusions of law as to the damages caused by the relevant events, and the comparative liability for those damages as between Signet and Paragon.

I. Findings of Fact

A. The History of the DPDS1

In 1979, the Dynamically Positioned Drillship Number 1 ("DPDS1") began operating as a 449-foot, Liberian flagged, deep water drilling ship. The vessel possessed thrusters that enabled it to remain dynamically positioned over a drilling site in deep water. Over the decades, various owners maintained and upgraded the drillship. For example, in 2008, the owners fully refurbished the vessel at an estimated cost of \$350-500 million.

In 2010, Noble, Paragon's parent company at the time, acquired the DPDS1. Over the next few years, Noble added new equipment and otherwise improved the vessel in preparation for work

¹ Several parties possess a complex corporate structure, which the parties do not dispute and which they set out as Admissions of Fact within the Joint Pretrial Order. (Joint Pretrial Order ("JPO"), ¶¶ 1–4, 6, (Doc. 314, 35–40)) The Court adopts those admitted facts and for convenience will refer to the respective corporate parties as Paragon, Signet, American Club, Noble, Gulf Copper, and the University of Texas.

² The parties also presented 16 witnesses by deposition. See P.Ex.45–P.Ex.56 (Docs. 446-1–12); S.Ex.331–S.Ex.334 (Docs. 431-2–5). The Court accepted the deposition excerpts as if the witnesses had testified at trial.

off the Brazilian coast. Aldert Schenkel, Paragon’s Vice President of Engineering, oversaw this work and stated that the DPDS1 “was in really good shape” at that time.³

In 2014, Noble spun off Paragon, which became the sole owner of the DPDS1. The drillship continued operations in Brazil. The following year, a downturn in the crude oil market decreased the demand for deep water drilling ships. As a result, Paragon decided to move the vessel to Port Arthur, Texas, and the drillship never again had commercial working ventures. By no later than mid-August 2017, Paragon intended to scrap the DPDS1.⁴

Between 2015 and 2017, the DPDS1 remained “cold stacked”—i.e., the vessel was essentially shut down without a crew onboard—at two separate locations in Texas: Port Arthur and Port Aransas. During these years, four Paragon employees held primary responsibility for the DPDS1’s management and care: Charlie Yester (Senior Vice President of Operations), Aldert Schenkel (Vice President of Engineering), Michael Koenig (Marine Operations Manager), and Jason Petten (Technical Marine Manager). They each possessed significant experience in the maritime drilling industry, although they possessed limited experience preparing for hurricane season in the Gulf of Mexico.

B. Paragon and Signet Business Relationship

1. The Master Charter Agreement (“MCA”)

In June 2015, Paragon and Signet began their business relationship by jointly creating a Master Charter Agreement (MCA) to govern at least some of their business dealings. Within the industry, companies who plan to repeatedly work together commonly use an MCA to “pre-negotiate such things as the indemnities, warranties, [and] governing law”.⁵ Each company assigned an in-house counsel—Jay Oliver, Assistant General Counsel for Paragon, and Scott Reid, General Counsel for Signet—to represent its respective interests in the negotiations.

³ Schenkel Dep. (Vol. II), 180:12–13, P.Ex.45 (Doc. 446-1, 129).

⁴ Koenig Day 2 Tr., 19:15–24 (Doc. 448).

⁵ Oliver Day 2 Tr., 297:8–18 (Doc. 448).

The parties ultimately signed the MCA.⁶ This successful conclusion, however, did not create an enforceable contract. Rather, the signed document solely provided a form to shorten the negotiation and drafting process when Paragon required vessel-chartering services for specific projects. The MCA established a standard base of legal terms for certain work that Paragon might contract in the future from Signet, and allowed the companies' respective commercial teams to finalize individual vessel hires more quickly by providing only the details needed for the vessel specifications, such as the rate, time, and pick up and redelivery locations. Reid testified that one of Signet's primary motivations for entering into the MCA was that the company viewed Paragon as a desirable customer in the Gulf of Mexico.

The MCA contained three sections: (1) a three-page manuscript outlining the intent of the agreement; (2) Part I of the Baltic & International Maritime Council (BIMCO) SUPPLYTIME 2005 Uniform Charter Party for Offshore Service Vessels; and (3) Part II of the BIMCO form, which contained detailed provisions that would govern all services provided. The BIMCO form functioned as a towage contract. Part I contained 35 blank boxes that the parties filled with each job's specific commercial terms, such as the services to be provided, the vessel that would be supplied, the time and place of delivery, and the rates. Such terms varied from project to project, and the companies' business representatives, rather than in-house counsel, would agree upon them. Oliver testified that absent completion of Part I, "you don't have a charter."⁷

Within Part II, Section 1.3 indicated that the MCA "shall control and govern in all situations in which Owners [(Signet)] charter to Charterers [(Paragon)] a vessel or vessels, and the terms and conditions of this Agreement shall be deemed incorporated by reference".⁸ At the same time, other sections of Part II noted that the contract applied to "offshore activities" and "voyages",⁹ and no section referenced hold-in-place or in-harbor services.

⁶ *Master Charter Agreement*, P.Ex.4 (Doc. 409-2).

⁷ Oliver Day 2 Tr., 310:24–311:9 (Doc. 449).

⁸ *Master Charter Agreement*, P.Ex.4 (Doc. 409-2, 1).

⁹ *Id.* at 11 (Section 6(a)).

2. The Signet Tariff

In August 2016, Signet published its tariff terms and conditions for the Ingleside division of its operations, a document referred to as the “Tariff”.¹⁰ The agreement applied to tug services that Signet provided to customers within the greater Corpus Christi port area.

Tug companies in United States ports commonly use tariffs, which establish the terms of service, such as the applicable rate and indemnity obligations, so that all entities receive tug services within a specific port on equal terms. During the relevant period, Signet’s competitors within the Greater Port of Corpus Christi maintained tariffs with set rates, terms, and conditions.

Signet delivered its Tariff to customers every January and after significant modifications. The parties did not provide evidence as to whether or when Signet delivered the Tariff to Paragon before August 2017. At the same time, Paragon does not dispute that it could have accessed the Tariff, as Signet had published it.

C. The DPDS1 in Port Arthur, Texas

In 2015, Paragon cold stacked the DPDS1 at the Gulf Copper berth in Port Arthur, Texas. The vessel had no permanent crew onboard, but a mooring crew and Paragon employees regularly performed inspections. The DPDS1 always remained afloat and maintained its navigational aids, including battery-operated lights. Paragon also installed a RigStat GPS system to track small movements by the rig and to detect any leakage on the vessel through level sensors on the bilges. At least once a week, Koenig would check on the DPDS1 to do “whatever needed to be done”.¹¹

In early 2017, however, the dock owners in Port Arthur decided to convert the dock’s use. This decision forced Paragon to relocate the DPDS1.

Koenig oversaw the site-selection process for the new location, and he ultimately chose to dock the DPDS1 at Port Aransas. He considered several potential sites along the Gulf Coast, factoring in water and land access points, potential hazards beneath the water’s surface, the

¹⁰ *Signet 2016 Ingleside Tariff*, S.Ex.1 (Doc. 414).

¹¹ Koenig Day 1 Tr., 162–63 (Doc. 448).

quality of the dock bollards, and the potential effect that adjacent ship traffic could have on devising a suitable mooring arrangement. He considered each site's proneness to hurricanes, weighing the potential berth's location and possible hurricane landfalls. This analysis included reviewing studies of the historical tracks of hurricanes approaching the Texas coastline. Koenig did not detail the specific historical information that he reviewed, but Signet's weather expert, Joseph Spain, testified that between 1951 and 2020, 23 hurricanes passed or made landfall within 50 nautical miles of Port Aransas. He explained that in a ten-year period, a 41.1% chance exists of a major hurricane striking the Texas coast, and that in his opinion, "in any given year," a vessel owner along this coastline "[has] to be prepared for a major hurricane."¹²

Paragon maintained a general, written hurricane plan, but prepared such plans for individual vessels only if local laws required it. In Port Aransas, no laws or local authorities imposed such a requirement for a docked vessel.¹³ Still, Paragon understood that when tropical weather activity posed a threat to a docked vessel, Paragon had to choose between leaving the vessel docked during the storm or towing the vessel out to sea. In making this decision, Paragon would weigh the potential risks, benefits, and costs of each option.

To track potential threats, Paragon monitored tropical weather activity by receiving daily weather reports, principally from WeatherOperations ("WeatherOps"), which reported a storm's current intensity, conditions, location, and anticipated landfall. In addition, Paragon monitored the general and specific hurricane weather reports from the National Hurricane Center ("NHC").

Although Koenig testified about the analysis he undertook during the site-selection process, no Paragon representative testified about what the company learned from that assessment. For example, Schenkel could not recall any specific reports that Koenig (or anyone else at Paragon) generated from the analysis.¹⁴

¹² Spain Day 5 Tr., 90:18–20 (Doc. 452).

¹³ In contrast, when Paragon docked a drillship in Puerto Rico, local laws required a written hurricane plan for the vessel, so Paragon prepared one. Koenig Day 2 Tr., 36:4–16 (Doc. 449).

¹⁴ Schenkel Dep. (Vol. I), 168:14–25, 172:22, 173:1–9, P.Ex.45 (Doc. 446-1, 44–45).

Ultimately, Paragon decided to moor the DPDS1 at the Gulf Copper dock in Port Aransas. On May 30, Paragon had the DPDS1 towed to its new berth. Before the tow, Paragon hired Hugh Gallagher with Dutton's Navigation, an outside marine survey firm, to inspect the DPDS1. Gallagher certified that the drillship was in good condition for the tow.¹⁵

D. Port Aransas, May–July 2017

For the move to Port Aransas, Paragon required the services of tug boats to tow the DPDS1 from Port Arthur to Harbor Island, near the port of Corpus Christi. Paragon negotiated with Signet under the MCA for the services of its tugs. The parties agreed on Part I of the BIMCO, but never executed the document for these services. Paragon ultimately chose another tow service provider, which towed the DPDS1 to Harbor Island. From that point, Paragon hired four Signet tugs to assist the DPDS1 to the Gulf Copper dock. For these services, the parties never discussed the MCA, and Signet invoiced Paragon in accordance with the Tariff.

On May 30, the DPDS1 arrived at her new berth. The vessel lay bow in to the slip, with the dock to her port, and with the Noble semisubmersible oil rigs moored across the slip to the DPDS1's starboard.

Schenkel, Koenig, and Petten designed the mooring system for the drillship at this location. To evaluate the strength of the system, Paragon hired the consulting company Genesis Engineering. The first evaluation occurred in late May, before the DPDS1 reached the Gulf Copper dock. Paragon provided Genesis with the line types, which included 10 three-inch Dyneema ropes and 10 three-inch polyester ropes. In general, different lines exhibit varying breaking strengths and elasticity. The Dyneema lines represented class two ropes, possessing higher breaking strength and lower elasticity. Class one ropes, such as polyester lines, exhibit higher elasticity, but possess lower breaking strength. In addition, the tension on the ropes, and the evenness of the tension across all the lines, can impact the overall strength of a mooring system. For its initial

¹⁵ Gallager Dep., 81:1-8, P.Ex.50 (Doc. 446-6, 22).

report, Genesis applied assumed tension metrics. Although Paragon received the first Genesis report, it is apparent that Paragon never utilized the mooring system depicted in that analysis.

Shortly after docking the DPDS1 at the Gulf Copper dock, an issue arose regarding the mooring system. On at least five occasions between May 31 and June 6, large tanker vessels passing near the docked DPDS1 caused “surge incidents”, in which a tanker vessels’ passage caused the water level to rise and fall rapidly. Several mooring lines holding the DPDS1 in place parted, and metal mooring components called double bits or double bollards broke away from their welded bases on the vessel’s deck. The DPDS1 never broke away from the dock, but on numerous occasions, Paragon hired Signet tugs to come alongside the vessel to ensure that it remained in place.

In response to the surge incidents, Paragon took steps to strengthen the mooring system, including installing new bollards and upgrading at least some of the mooring ropes from polypropylene to higher-quality Dyneema lines. Paragon also replaced all the bits on the drillship’s port side, regardless of whether they had broken during the surge incidents. Additionally, Paragon installed chains, which were “heavy-duty steel wire/chain combinations” that absorbed the energy of the surges.¹⁶ Koenig explained that Paragon used “two different class[es] of rope” to create “a more balanced system”.¹⁷ He estimated that the overall improvements and the analysis cost approximately \$500,000.

After Paragon completed the improvements, Petten conferred with Genesis to re-evaluate the mooring system. Paragon again informed Genesis of the line types, which consisted of thirteen lines, including six three-inch Dyneema lines, two wire-chain-wire combinations, and five three-inch polyester lines. In its June report, Genesis concluded that the mooring system could withstand sustained winds of approximately 75 miles per hour without exceeding industry

¹⁶ Koenig Day 2 Tr., 203 (Doc. 449); Yester Day 2 Tr., 57 (Doc. 449); Schenkel Dep. (Vol. I), 71:21–72:23, (Vol. II), 229:3–230:11, P.Ex.45 (Doc. 446-1, 20, 142).

¹⁷ Koenig Day 1 Tr., 203:19–205:25 (Doc. 448) (“[I]f you’re mooring up to stay for a while, like we were, that’s important to have a balanced system and one that’s analyzed by an engineering company.”).

recommended stress levels on each mooring line.¹⁸ Standard mooring-marine guidelines recommend that the lines possess a minimum factor of safety (“FOS”) of 2.0, which “means that a given mooring lines is loaded to 50% of its minimum breaking strength (MBS)”.¹⁹ As the factor of safety decreases, the probability that the mooring line will fail increases. The Genesis reports consistently reported conclusions based on a 2.0 FOS.

The improvements resolved the issue of the surge incidents.

In July, Genesis conducted another analysis, again relying upon the line types that Paragon provided. In this evaluation, Genesis assumed a mooring system composed of eleven lines, including four three-inch Dyneema lines, five three-inch polyester lines, and two wire-chain-wire combinations.²⁰ Not only did the total number of lines decrease by two as compared to the June report, but the placement of the lines between the available anchor points shifted. The record does not make clear what prompted Paragon to request this analysis, or whether the changes reflected actual modifications to the mooring system. In this July report, Genesis concluded that the depicted mooring system could withstand sustained wind speeds of approximately 77 to 80 miles per hour, which represents a low-level Category 1 hurricane.²¹

In early August, based on the Genesis reports, Paragon representatives communicated regarding the conditions that would require the DPDS1’s evacuation. Petten concluded that the mooring analysis “show[ed] the facility could stay on location up to a Category 1 hurricane”.²² Koenig reached the same conclusion, and he intended to order the DPDS1’s evacuation if a predicted storm threatened to exceed the mooring system’s capacity.²³ Schenkel recommended a conservative approach: “[T]o be sure we leave port in time, the word ‘hurricane’ needs to be

¹⁸ Genesis Engineering Report, June 26, 2017, S.Ex.160 (Doc. 423-13). Various sources utilize both knots per hour and miles per hour when reporting wind speeds. For consistency, the Court converts all wind speed measurements to miles per hour.

¹⁹ *Id.*

²⁰ Genesis Engineering Report, July 3, 2017, S.Ex.161 (Doc. 423-14).

²¹ See Saffir-Simpson Hurricane Wind Scale (defining a Category 1 hurricane as possessing sustained winds between 74 and 95 miles per hour).

²² Petten Day 2 Tr., 175:23–25 (Doc. 449).

²³ Koenig Day 1 Tr., 147–49, 209 (Doc. 448).

broadly interpreted as a severe storm.”²⁴ He continued: “Due to the uncertainty in the predictions the DPDS1 should depart (10 days prior land fall) when a storm is approaching with a predicted wind speed of approx. [63+ miles per hour] which is equivalent to a BF 10 storm (range [55 to 63 miles per hour]).”²⁵ Shortly after this communication, he followed up to clarify that the vessel would “leave port 3 days prior to landfall” and would spend 10 days offshore.²⁶

Consistent with these email communications, Schenkel testified that Paragon always planned to tow the DPDS1 into the Gulf of Mexico in advance of a storm.²⁷ As a result, he was not concerned that the mooring system was incapable of withstanding more severe hurricane conditions. In other words, Paragon had designed its system to withstand no more than the winds of a Category 1 hurricane, intending to evacuate the DPDS1 from the port in the event of a stronger storm.

At trial, Koenig and Yester described the competing risks involved in the decision to keep a drillship such as the DPDS1 in port or to tow it out to sea when a storm approached. Koenig emphasized the safety risks posed by towing a cold-stacked vessel like the DPDS1 out to sea. The tugboat crew would face inherent threats. For example, the fact that the drillship would have no crew meant that if a tow line became unattached while at sea, no one would be onboard to reattach the line. In addition, if the vessel collided with an offshore oil platform or another vessel in the Gulf of Mexico, the tugboat would need to cut loose from the vessel or potentially be damaged. In addition, the drillship itself could sink and hit a pipeline, causing environmental damage.

Yester explained that in general, he would “wait as long [as he could] to make the decision” of whether to remain in port or tow the DPDS1 out to sea, because of the unpredictable nature of tropical weather events, combined with the slow speed at which a vessel must be towed.²⁸ As he

²⁴ Schenkel Email, S.Ex.271 (Doc. 429-10, 1–2).

²⁵ *Id.*; Schenkel Dep. (Vol. I), 77:9–21, P.Ex.45 (Doc. 446-1, 21).

²⁶ Schenkel Email, S.Ex.271 (Doc. 429-10, 1).

²⁷ Schenkel Dep. (Vol. I), 193:1–21, P.Ex.45 (Doc. 446-1, 50).

²⁸ Yester Day 1 Tr., 65:1–2 (Doc. 448).

explained, taking a drillship to sea could inadvertently place the vessel directly in the storm's path.²⁹ In addition, towing a vessel out to sea entailed a cost ranging from \$300,000 to \$900,000.

E. Hurricane Harvey

1. Thursday and Friday, August 17–18, 2017

On Thursday, August 17, the NHC issued an advisory for Potential Tropical Cyclone Nine, reporting that the storm had strengthened into Tropical Storm Harvey and lay east of the Caribbean Sea.³⁰ The WeatherOps report for the same day forecasted that the storm would travel in a westward direction and reach Honduras and Guatemala within three and four days, respectively. WeatherOps noted that “some model guidance does continue to strengthen the system to a low-end Category 1 Hurricane just before it reaches Belize.”³¹ At the same time, the report clarified that because of “low confidence in the intensity forecast beyond 36 hours”, WeatherOps did not forecast that Tropical Storm Harvey would become a hurricane.³²

On Friday, August 18, the WeatherOps report maintained Tropical Storm Harvey on a westwardly track, with little to no change in trajectory as compared to the previous day’s forecast.³³ The report continued to predict that the storm would not reach hurricane strength. The NHC advisory reported that “slow strengthening is possible during the next 48 hours.”³⁴

Both Paragon and Signet received these reports. Signet personnel believed that Tropical Storm Harvey’s “current predictions should have her clear of all Signet Vessels” in the Port Aransas area.³⁵ Paragon employees noted the storm, but when they “left work Friday, it was, well, let’s see Monday what’s going on. Because it was on the other side of Mexico, . . . and we didn’t know what was going to happen.”³⁶

²⁹ *Id.* at 64:13–66:19.

³⁰ NHC Potential Tropical Cyclone Nine Forecast/Advisory 1, P.Ex.13 (Doc. 410-14, 7).

³¹ WeatherOps Active Storm Advisory # 9, P.Ex.13 (Doc. 410-14, 13).

³² *Id.*

³³ WeatherOps Active Storm Advisory # 10, P.Ex.13 (Doc. 410-14, 21).

³⁴ NHC Tropical Storm Harvey Advisory 3A, P.Ex.13 (Doc. 410-14, 23).

³⁵ Signet E-mail, P.Ex.13 (Doc. 410-14, 47).

³⁶ Yester Day 1 Tr., 69:23–70:3 (Doc. 448).

2. Saturday and Sunday, August 19–20

At 4:00 p.m. on Saturday, August 19,³⁷ the NHC advised that Tropical Storm Harvey had weakened to a tropical depression.³⁸ WeatherOps predicted that the storm would make landfall over the Yucatan Peninsula and was unlikely to reach the Texas coast.³⁹ By late Saturday evening, the NHC advised that the “Remnants of Harvey” degenerated into a “Tropical Wave,” and that the NHC would not release another public advisory on the system “unless regeneration occurs”.⁴⁰ Similarly, the WeatherOps report indicated that “Harvey has weakened below tropical depression level and is no longer considered a threat.”⁴¹

During the early hours of Sunday, August 20, WeatherOps continued to monitor the situation, noting that while the system had “weakened into an open wave”, the “remnants may reintensify toward the end of the week over the Bay of Campeche”.⁴² By mid-morning, WeatherOps reported that the remnants had “become better organized” and that a “moderate potential [existed] for restrengthening into a minimal depression or tropical storm prior to reaching northern Honduras and the Yucatan peninsula.”⁴³ The accompanying graphical “Forecast Track” depicted a path that would have the storm make landfall as a tropical storm near Tampico, Mexico, with the cone of uncertainty possibly reaching into deep south Texas, but not as far north as Port Aransas.⁴⁴ Yester testified that he understood that the cone of uncertainty meant that the storm’s track could fall within any portion of the cone.⁴⁵ Six hours later, the next report communicated similar information.⁴⁶

³⁷ Various exhibits utilize different time zones. For convenience, the Court converts all time references to Central Daylight Time.

³⁸ NHC Tropical Depression Harvey Advisory # 10, P.Ex.13 (Doc. 410-14, 66).

³⁹ WeatherOps Atlantic Tropical Daily Planner, P.Ex.13 (Doc. 410-14, 64).

⁴⁰ NHC Remnants of Harvey Advisory # 11, P.Ex.13 (Doc. 410-14, 71).

⁴¹ WeatherOps Active Storm Advisory – Tropical Depression Harvey 18, P.Ex.13 (Doc. 410-14, 72).

⁴² WeatherOps Atlantic Tropical Daily Planner, P.Ex.13 (Doc. 410-14, 75).

⁴³ WeatherOps Significant Tropical Disturbance Advisory – Harvey 9, P.Ex.13 (Doc. 410-14, 76).

⁴⁴ WeatherOps Tropical Disturbance Harvey Advisory # 19, P.Ex.13 (Doc. 410-14, 77).

⁴⁵ Yester Day 1 Tr., 139:5–21 (Doc. 448).

⁴⁶ WeatherOps Tropical Disturbance Harvey Advisory # 20, P.Ex.13 (Doc. 410-14, 80).

That Sunday evening, WeatherOps reported that the storm remained likely to develop, at most, into a tropical storm.⁴⁷ For the first time, however, the long range (i.e., 120-hour) cone of uncertainty included the Port Aransas area.⁴⁸ The new projection meant that a tropical storm could make landfall near the DPDS1 by the end of the week. Koenig testified that at some point over the weekend, the storm “got my attention and I started letting [Schenkel] and [Yester] know that we needed to watch [] the weather [] and consider moving the DPDS1 out of port.”⁴⁹

The storm also captured the attention of at least one other vessel owner, Noble, which had two drill ships docked further south in Port Isabel, Texas. On Sunday, the WeatherOps projected track for the weather system placed Port Isabel slightly outside the cone of uncertainty’s northern boundary, with the storm’s landfall projected for Friday, August 25, south of Tampico, Mexico, with maximum sustained winds of 70 miles per hour.⁵⁰ Based on its severe weather plan, Noble immediately began evacuating its drill ships.⁵¹

3. Monday, August 21

By 10:00 a.m. on Monday morning, WeatherOps had released two more reports, which proved significant. The storm remained a tropical disturbance and was “generally not well-organized”.⁵² In the 4:00 a.m. report, WeatherOps predicted that Harvey would reach maximum wind speeds of 65 miles per hour on August 25.⁵³ Six hours later, WeatherOps reduced this forecast, indicating that maximum winds would reach 60 miles per hour on August 25.⁵⁴ In both reports, the forecasted track had shifted significantly northward, placing Port Aransas well within

⁴⁷ WeatherOps Tropical Disturbance Harvey Advisory # 21, P.Ex.13 (Doc. 410-14, 83).

⁴⁸ *Id.*

⁴⁹ Koenig Day 1 Tr., 227:1–15 (Doc. 448); *see also* Yester Day 1 Tr., 80–81 (Doc. 448).

⁵⁰ WeatherOps Tropical Disturbance Harvey Advisory # 20, P.Ex.13 (Doc.410–14, 80).

⁵¹ Report for the SIGNET ARCTURUS, S.Ex.29 (Doc. 416-3, 5–9).

⁵² WeatherOps Tropical Disturbance Harvey Advisory # 23, P.Ex.13 (Doc. 410-14, 89).

⁵³ WeatherOps Tropical Disturbance Harvey Advisory # 22, P.Ex.13 (Doc. 410-14, 86).

⁵⁴ WeatherOps Tropical Disturbance Harvey Advisory # 23, P.Ex.13 (Doc. 410-14, 89).

the long-term cone of uncertainty. At the same time, the predicted landfall remained in northern Mexico.⁵⁵

At 11:05 a.m. that morning, Schenkel communicated to Koenig that while concern existed, they had time before making a definitive decision regarding the DPDS1:

The storm Harvey is moving in and get[ting] closer to the DPDS1 (within 96 hours) than anticipated and will be at [60 miles per hour] within 96 hours (reduced over the last 6 hours). The max allowable wind speed for the DPDS1 [to tow out to sea] was set at [72 miles per hour] and notice period for readiness 72 hours. We have to make a decision within the next 24 hours about the next step since the speed is close to the acceptable speed of [63 miles per hour] to start preparing departure. It seems we don't have to do anything yet.”⁵⁶

A few minutes later, Yester forwarded the WeatherOps reports to Schenkel, opining that he did not “see where we are in any danger unless something causes a drastic turn to the North.”⁵⁷ Koenig disagreed, testifying that based on these reports, he recommended that morning that Paragon evacuate the DPDS1.⁵⁸ Paragon chose to wait before making a definitive decision.

At the same time, Yester “decided to start whatever process it took to get port clearance and tugboats and everything ready to go” to prepare for the possibility that the storm would take a turn to the North.⁵⁹ He recognized that he had to start the process as soon as possible because it required two to three days to obtain the necessary approvals and secure the required logistical support. Late that morning, he called Patrick McTigue of Signet to reserve tugs to tow the DPDS1 into the Gulf of Mexico in the event that Paragon decided to evacuate the vessel. Koenig testified that Signet was going to be the only vendor to assist the DPDS1 with an evacuation, meaning that Signet would provide both the harbor tow and offshore tow services. McTigue provided a “Scope of Work Estimated Cost Analysis” shortly after Koenig called him.⁶⁰ The same day, Koenig began to fill out the applications for the United States Coast Guard and port authorities and contacted

⁵⁵ WeatherOps Significant Tropical Disturbance Advisory – Harvey # 24, S.Ex.74 (Doc. 419-8, 41-46) (“The GFS and ECMWF are in rather good agreement, bringing Harvey as a tropical storm to a position just south of Brownsville by Friday afternoon.”).

⁵⁶ Schenkel Email, S.Ex.271 (Doc. 429-10, 4).

⁵⁷ Yester Email, P.Ex.17-A-Part 1 (Doc. 410-31, 252).

⁵⁸ Koenig Day 2 Tr., 41:11–13 (Doc. 449).

⁵⁹ Yester Day 1 Tr., 71:7–9 (Doc. 448).

⁶⁰ Signet’s “Scope of Work Estimated Cost Analysis”, P.Ex.17-A-Part 1 (Doc. 410-31, 1–2).

Dutton's Navigation to have a surveyor visit the vessel to obtain a certification approving the towing gear and towing arrangement. He took these steps "while we were seeing the storm progress and people above [him]" made the decisions regarding the vessel.⁶¹

That afternoon, at 4:00 p.m., WeatherOps released its next report, forecasting that Harvey would make landfall "just south of Brownsville" on Friday, August 25, with maximum winds of 70 miles per hour.⁶² Corpus Christi lay well within the cone of uncertainty. The projected track had shifted to the north, and WeatherOps explained that certain factors "may result in additional northward adjustments."⁶³

Six hours later, in its final report for Monday, WeatherOps indicated "[n]o significant changes . . . regarding the track or intensity forecast".⁶⁴ The report forecasted that Harvey would "make landfall over northern Mexico or the Lower Texas Coast as a strong tropical storm or hurricane between 72 and 96 hours."⁶⁵ The maximum sustained wind speeds for Friday, August 25 were still predicted to be 70 miles per hour. Paragon representatives do not appear to have commented upon either of these latest revised forecasts.

At least one company, Rowan Companies, decided by no later than Monday to evacuate the Port Aransas port. Rowan contacted Captain Jay Rivera, the presiding officer of the Aransas-Corpus Christi Pilots Association, to express the company's intent to evacuate.⁶⁶

4. Tuesday, August 22

The early Tuesday morning report from WeatherOps made significant changes to the storm's forecasted track and strength. The storm remained a "Tropical Disturbance", but was now expected to strengthen into a Category 1 hurricane with sustained wind speeds of 75 miles per hour by Friday, August 25.⁶⁷ The most likely path had again shifted northward, projecting landfall

⁶¹ Koenig Day 1 Tr., 230:20–23 (Doc. 448).

⁶² WeatherOps Tropical Disturbance Harvey Advisory # 24, P.Ex.13 (Doc. 410-14, 93).

⁶³ *Id.*

⁶⁴ WeatherOps Tropical Disturbance Harvey Advisory # 25, P.Ex.13 (Doc. 410-14, 96).

⁶⁵ *Id.*

⁶⁶ Rivera Day 3 Tr., 256:19–257:16 (Doc. 450) (testifying that the initial call occurred on either Sunday or Monday).

⁶⁷ WeatherOps Tropical Disturbance Harvey Advisory # 26, P.Ex.13 (Doc. 410-14, 99).

just south of Corpus Christi as a tropical storm. The system also had slowed, so that landfall was predicted for early morning on Saturday, August 26.

At around 6:00 a.m. that morning, Yester forwarded the report to Koenig and Schenkel, asking, “What Now?”⁶⁸ Schenkel responded at 6:51 a.m., noting that the storm’s intensity had increased, but opining that “the storm . . . might move up North East even more and clear the DPDS1 on the clean side within 84 hours (might know within 6 to 12 hours).”⁶⁹ He asked about certain preparations: “Mike [Koenig] is talking to Signet for Tug and port Captain about the preparations (yes/no?).”⁷⁰ A few minutes later, Koenig responded, commenting that “[t]he forecaster is confident the track will go more to the north. This puts the DPDS1 on the clean side.”⁷¹ When referencing “clean side”, Yester meant that in Port Aransas, the DPDS1 would be on the storm’s west wall, which would deliver less intense winds and surges.⁷² In essence, Yester read the forecast as predicting that the storm would make landfall well north of Port Aransas, with the center of the storm passing to the east. As moving the DPDS1 out to sea meant traveling eastward—i.e., into the stronger side of the storm—“we would have a bit of a hard time finding anywhere to go”, he testified.⁷³ In addition, given that the storm’s wind blew in a counterclockwise rotation, Yester’s interpretation of the WeatherOps report meant that “the winds would be pushing the vessel against our bulkhead and not pulling it away from the bulkhead, which would be good news for us if that’s what happened.”⁷⁴ Yester responded to both of these emails separately. To Schenkel, he recommended that “[w]e should start some preparations but hold off for another 12–24 hours, unless [Koenig] has another view.”⁷⁵ Simultaneously, in a message to both Koenig and Schenkel, he merely noted, “OK—we’ll see what happens.”⁷⁶

⁶⁸ Yester Email, P.Ex.17-A-Part 1 (Doc. 410-31, 253).

⁶⁹ Schenkel Email, P.Ex.17-A-Part 1 (Doc. 410-31, 254).

⁷⁰ *Id.*

⁷¹ Koenig Email, P.Ex.17-A-Part 1 (Doc. 410-31, 253).

⁷² Yester Day 1 Tr., 83:15–20 (Doc. 448).

⁷³ *Id.* at 83:25–84:1.

⁷⁴ *Id.* at 84:3–7.

⁷⁵ Yester Email, P.Ex.17-A-Part 1 (Doc. 410-31, 253–54).

⁷⁶ *Id.* at 255.

At 10:00 a.m., WeatherOps released Advisory # 27, again shifting the forecasted path slightly northward. The “consensus forecast” was “for a strong tropical storm or category one hurricane to reach the central Texas coast Friday.”⁷⁷ Three hours later, WeatherOps released Advisory # 27A, which reported that “recently available forecast guidance continues to indicate significant intensification on Thursday and Friday.”⁷⁸

At 1:00 p.m. on Tuesday, the Coast Guard Captain for Port Aransas set “Port Condition WHISKEY” for the ports of Brownsville, Corpus Christi, and Victoria. This alert level meant that the Coast Guard anticipated sustained gale force winds (39 to 54 miles per hour) at the port from a tropical or hurricane force storm within 72 hours. Signet advised its captains that “several of our customers are making plans to activate their Hurricane Response Plans within the next 24 to 36 hours” and directed captains to “ensure all crew members are made aware of these potential operations and all vessels are readied should the orders begin to come in.”⁷⁹

At 4:00 p.m., WeatherOps projected that the storm would make landfall in 72 hours (i.e., Friday afternoon) as a Category 1 hurricane with sustained wind speeds of 80 miles per hour and with the center of the storm striking just north of the Corpus Christi area.⁸⁰ Shortly after this report issued, a Signet employee reported that “Sector Corpus Christi has been notified that they are in Condition X-Ray (48 hours) and vessel traffic is starting to leave the area.”⁸¹

5. Wednesday, August 23

On Wednesday at 4:00 a.m., WeatherOps reported “[a] slight shift northward in the forecast track . . . where the center makes landfall over the Middle Texas Coast. The intensity forecast still has Harvey becoming a tropical storm or possibly a hurricane over the western Gulf prior to landfall.”⁸²

⁷⁷ WeatherOps Tropical Disturbance Harvey Advisory # 27, P.Ex.13 (Doc. 410-14, 105).

⁷⁸ WeatherOps Tropical Disturbance Harvey Advisory # 27A, P.Ex.13 (Doc. 410-14, 108).

⁷⁹ Gibson Email, P.Ex.23 (Doc. 439-43).

⁸⁰ WeatherOps Tropical Disturbance Harvey Advisory # 28, P.Ex.13 (Doc. 410-14, 111).

⁸¹ Johnson Email, P.Ex.13 (Doc. 410-14, 113). Hurricane Port Condition X-RAY means that the weather advisories indicate sustained gale force winds (39 to 54 miles per hour) from a tropical or hurricane force storm are predicted to impact the port within 48 hours.

⁸² WeatherOps Tropical Disturbance Harvey Advisory # 30, P.Ex.13 (Doc. 410-14, 124).

About four hours later, Yester formally notified Paragon employees of the decision to evacuate the DPDS1: “Due to the impending arrival of Tropical Storm ‘Harvey’ we are compelled to move the DPDS1 out of its mooring to open water.”⁸³ He reported that Paragon intended to “move the rig this evening or tomorrow morning, depending upon timing of port clearance and harbor tugs to assist with the movement.”⁸⁴ Schenkel responded almost immediately, asking Paragon employees to “inform DNV about the planned move”.⁸⁵ He echoed Yester’s message that the vessel’s departure would occur “this afternoon or early in the morning”, with Signet tugs assisting with the dead tow.⁸⁶ Over the next few hours, Paragon’s employee, Ray Carrera, notified various agencies and companies about Paragon’s decision, although he noted his “sense . . . that this storm will not be too bad.”⁸⁷

By late morning, Paragon learned that the DPDS1’s departure would not occur that day due to ship traffic, but was “planned for tomorrow at first day light.”⁸⁸ A few hours later, the anticipated departure time was delayed again, to Thursday afternoon.

At some point on Wednesday, in-house counsel for Paragon and Signet began discussions regarding the contract that would govern Signet’s provision of tug services for towing the DPDS1 out to sea. Signet’s counsel (Reid) and Paragon’s counsel (Oliver) exchanged various e-mails throughout the day, focusing on finalizing the terms of Part I and Part II of the Master Charter Agreement. The negotiations fixated on the insurance and indemnification provisions within Part II. By late afternoon, Paragon had accepted Signet’s revisions to Part II, “except for the modifications we made to your proposed insurance revisions.”⁸⁹ Paragon acknowledged that the amendments to Part II of the MCA placed greater exposure on Paragon and would cause it to be responsible for any damage to a Signet tug in a salvage-type operation or loss to third-party

⁸³ Yester Email, P.Ex.17-A-Part 2 (Doc. 410-32, 2).

⁸⁴ *Id.*

⁸⁵ Schenkel Email, P.Ex.17-A-Part 2 (Doc. 410-32, 1).

⁸⁶ *Id.*

⁸⁷ UT Email, P.Ex.28-D (Doc. 441-31, 1).

⁸⁸ Koenig Email, P.Ex.17-A-Part 1 (Doc. 410-31, 3).

⁸⁹ Oliver Email, P.Ex.17-A-Part 2 (Doc. 410-32, 9).

property, and any costs associated with cleanup. The terms of the insurance were also amended to require Paragon to name Signet as an additional insured on its insurance policies.⁹⁰ By late afternoon, Signet “agree[d] that the changes to the insurance addendum are acceptable”.⁹¹ Late in the evening, Paragon requested that Signet prepare Part I and Part II for signature.

During the afternoon, the situation regarding the DPDS1’s tow out worsened. Port authorities gave priority to U.S. Navy vessels “departing en-masse from [Corpus Christi]”,⁹² and Tropical Storm Harvey “appear[ed] to be headed straight to” the area.⁹³ Signet advised Paragon that it would attempt to tow the DPDS1 out to sea after the priority vessels departed, “if the port has not been closed” by that time.⁹⁴ If the port closed, Signet would ask Captain Gibson, one of its local tug boat operators, “to put a tug or two onto DPDS1 to hold her to the dock at Gulf Copper”, but the ultimate decision would remain the captain’s, as another company had a right of first refusal for his services.⁹⁵ At 5:12 p.m., Schenkel forwarded Signet’s communication to Yester, warning him that the DPDS1 “might not be able to leave the port anymore”.⁹⁶ He noted that they had “to work on a plan B which consist[ed] of keeping the rig at the current berth and using 2 Signet tugs to stabilize the rig.”⁹⁷ Later that evening, Koenig responded that “[d]epending on the forecast in the morning it might be best to stay in the berth with two tugs rather than go outside and possibly be in the middle of the storm.”⁹⁸

⁹⁰ Modified Part I, *Master Charter Agreement*, AC.Ex.9, (Doc. 436-7, 5).

⁹¹ Oliver Email, P.Ex.17-A-Part 1 (Doc. 410-31, 272).

⁹² Snyder Email, P.Ex.17-A-Part 2 (Doc. 410-32, 11).

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ Schenkel Email, P.Ex.17-A-Part 2 (Doc. 410-32, 10).

⁹⁷ *Id.*

⁹⁸ Koenig Email, P.Ex.17-A-Part 2 (Doc. 410-32, 10).

6. Thursday, August 24

At 4:00 a.m. on Thursday morning, the NHC issued an official Storm Surge and Hurricane Warning for the Port Aransas area. In this advisory, the NHC forecasted Harvey to strengthen into a hurricane for the first time.⁹⁹

Less than an hour later, Signet's counsel confirmed that he would "generate the BIMCO agreement for today's tow".¹⁰⁰ It is unclear whether Signet actually prepared the final form of the contract, but the parties agree that neither side signed such a document.

And by early morning, the issue became moot. Around 8:00 a.m., Signet's Captain Gibson informed Snyder that he had just been advised that the DPDS1 would not be allowed to leave the port; the Coast Guard was closing the Port of Corpus Christi. Captain Gibson agreed "with the need to have hold tugs at Harbor Island with the [DPDS1] to keep her alongside at Gulf Copper."¹⁰¹ Minutes later, Snyder informed Paragon of the development. And at 9:30 a.m., Paragon communicated to stakeholders that the DPDS1 "will not be towed out and will remain in port."¹⁰²

Shortly after these communications, Snyder e-mailed his Signet colleagues that the company desired to provide the new services under the Tariff: "We need to pass onto [Paragon's representatives] we'll operate under our tariff for this."¹⁰³ Later that morning, Snyder spoke with Schenkel to discuss the situation. According to Snyder, Schenkel requested that Signet provide two z-drive tug boats to remain with the DPDS1 during the hurricane.¹⁰⁴ Snyder agreed, but expressly indicated that the services would be performed under the Tariff. At trial, Snyder recounted the exchange they had on the matter:

And [Schenkel] said, Barry, is that the best you can do, I don't care to use the tariff, I'd prefer to use the old contract.

I said, absolutely not, sir, it's very dangerous to use that.

⁹⁹ NHC Tropical Storm Harvey Advisory # 15, P.Ex.13 (Doc. 410-14, 173); NHC Tropical Storm Harvey Intermediate Advisory # 15A, P.Ex.13 (Doc. 410-14, 177).

¹⁰⁰ Reid Email, P.Ex.17-A-Part 1 (Doc. 410-31, 273).

¹⁰¹ Gibson Email, P.Ex.17-A-Part 2 (Doc. 410-32, 23).

¹⁰² Carrera Email, P.Ex.17-A-Part 2 (Doc. 410-32, 13) (emphasis in original).

¹⁰³ Snyder Email, S.Ex.125 (Doc. 421-22, 30).

¹⁰⁴ Schenkel Day 5 Tr., 202:3-6 (Doc. 452). A "z-drive" refers to a propulsion system that can rotate 360 degrees, enabling the tug boat to direct thrust in any direction. *Id.* at 140:16-18.

He said, all right, is that the best you can do?

I said, yes, Aldert, we've been friends a long time, this is protecting both of us.

He said, all right, get it done.¹⁰⁵

Schenkel testified that he could not recall the phone conversation with Snyder, and that it may or may not have occurred.¹⁰⁶

After the phone call, Snyder instructed Signet's attorney (Reid) to communicate with Paragon's counsel (Oliver) about using the Tariff for the revised assignment. That afternoon, Reid e-mailed Oliver, advising him that “[b]ecause we will not be towing, but instead will be holding the DPDS1 in place, Signet's work will be governed by our Ingleside Tariff”, which he attached to the message.¹⁰⁷ Reid noted his understanding that the companies' respective commercial teams had agreed to this contractual arrangement. In response, Oliver wrote, “Thanks for the update – much appreciated.”¹⁰⁸

By hiring Signet's services, Paragon believed that the tug boats pushing the DPDS1 against the mooring side would “reduce the tension on the mooring lines”. In addition, if the DPDS1 broke lose, “there would be two tugboat[s] tied to the ship that could sort of keep it under some kind of control”, and could help keep the drillship from colliding with other objects and vessels in the port.¹⁰⁹

In addition to hiring the Signet tugs, Paragon also bolstered the DPDS1's mooring system. Koenig was at the dock that morning, and he consulted with the surveyor he had previously contacted—Hugh Gallagher of Dutton's Navigation—whose task changed from certifying the DPDS1 for a tow out to inspecting the mooring system for a hold-in-place operation. Koenig and his crew of six to eight men “used everything he could find” to strengthen the mooring system.¹¹⁰

¹⁰⁵ Snyder Day 5 Tr., 203:1–10 (Doc. 452).

¹⁰⁶ Schenkel Dep. (Vol. I), 57:1–18, P.Ex.45 (Doc. 446-1, 16).

¹⁰⁷ Reid Email, S.Ex.125 (Doc. 421-22, 32).

¹⁰⁸ Oliver Email, S.Ex.125 (Doc. 421-22, 33).

¹⁰⁹ Koenig Day 1 Tr., 244-45 (Doc. 448); see also Yester Day 1 Tr., 73-74 (Doc. 448).

¹¹⁰ Koenig Day 1 Tr., 240-43 (Doc. 448).

They located three additional lines in a nearby warehouse and added them, using Koenig's pick-up truck to tighten the lines.¹¹¹ As to the condition of these new ropes, Gallagher testified that they looked like weaker polypropylene lines, were deteriorated, and would part easily due to their condition.¹¹² Koenig conceded that the mooring lines had some chaffing and were "used", and that degradation reduced their effectiveness.¹¹³

Paragon also provided information about a mooring arrangement to Genesis for an updated analysis. Based on that data, the revised Genesis analysis concluded that the mooring system could withstand wind speeds of up to 78 miles per hour. This result represented a small increase in the mooring system's strength as compared to the July mooring analysis.¹¹⁴ The new report, however, reflected a materially different mooring system, composed of thirteen Dyneema lines and two wire-chain-wire combinations.¹¹⁵ In essence, the report assumed that Paragon had replaced multiple polyester lines with Dyneema lines, which have a higher breaking strength, but less elasticity.

In the end, between May 26 and August 24, Genesis analyzed four different mooring systems for the DPDS1. Each mooring arrangement contained a different number of lines, varying line types, and shifting arrangements among the anchors. The trial record, however, casts doubt on the accuracy of any of those reports. While Genesis appears to have applied its software correctly when preparing the reports, it also relied solely on data that Paragon provided. And ample evidence revealed the inaccuracy of that data. For example, in all four reports, Paragon represented that the mooring arrangement included three-inch Dyneema Proton-8 ropes, which Koenig identified to Paragon's mooring expert, Christopher Brown, as blue lines in available photographs. Brown testified, however, that Proton-8 ropes at the time were available only in

¹¹¹ *Id.* at 241:7–11.

¹¹² *Id.* at 240:8–14; Gallagher Dep., 50:3–51:15, P.Ex.50, (Doc. 446-6, 15).

¹¹³ Koenig Day 2 Tr., 94:23–25 (Doc. 449).

¹¹⁴ Genesis Engineering Report, August 24, 2017, S.Ex.162 (Doc. 423-15, 3); Genesis Engineering Report, June 26, 2017, S.Ex.160 (Doc. 423-13, 3).

¹¹⁵ Genesis Engineering Report, August 24, 2017, S.Ex.162 (Doc. 423-15, 3).

yellow, suggesting that Koenig misidentified those lines.¹¹⁶ The distinction is material because each type of rope possesses unique mechanical properties and will react distinctly under stress.

The evolution of the mooring systems in the Genesis reports also reveals the absence of a rigorous design process. For example, the initial report in May contemplated 20 lines securing the DPDS1 to the dock, but the record reflects that Paragon never utilized that many lines to moor the drillship. The next two reports from June and July depicted differing numbers of lines and arrangements. The June report evaluated a system with five three-inch Dyneema ropes, five three-inch polyester ropes, and two wire-chain-wire combinations.¹¹⁷ The following month's report analyzed a system with one less three-inch Dyneema rope, and the remaining ropes in a slightly differing arrangement on the available anchors.¹¹⁸ No evidence explained why Paragon changed the lines, whether it did so, or whether either report reflected reality. Finally, the August report—representing Paragon's understanding of the mooring arrangement on the eve of Hurricane Harvey—stated that Paragon used thirteen three-inch Dyneema ropes, two wire-chain-wire combinations, and no polyester ropes.¹¹⁹ According to this final report, Paragon at some point in July and August removed all of the polyester ropes mooring the DPDS1 and replaced them with new Dyneema ropes. No Paragon witness testified about such a wholesale change to the mooring system, and such a system would be inconsistent with the analyses of both Paragon's and Signet's experts, based on photographs taken after the breakaway occurred. Those photos confirmed that the mooring system at the time of Hurricane Harvey included at least some polyester ropes. Not surprisingly, the parties' experts agreed that the final August 24 report did not reflect the actual composition of lines that secured the DPDS1 when Hurricane Harvey made landfall.¹²⁰ Don Barnes, another Paragon expert, agreed that it was “logical” for a vessel owner to

¹¹⁶ The Breakaway of the DPDS1, Report of Christopher Brown, P.Ex.17-L-1 (Doc. 424-43, 7); Brown Day 2 Tr., 235:6–22 (Doc. 449).

¹¹⁷ Genesis Engineering Report, June 26, 2017, S.Ex.160 (Doc. 423-13).

¹¹⁸ Genesis Engineering Report, July 3, 2017, S.Ex.161 (Doc. 423-14).

¹¹⁹ Genesis Engineering Report, August 24, 2017, S.Ex.162 (Doc. 423-15).

¹²⁰ Petten Day 2 Tr., 193:20–196:9 (Doc. 449); Barnes Day 2 Tr., 104: 11 – 105:22 (Doc. 449); Brown Day 2 Tr., 264:23–266:12 (Doc. 449); Greiner Day 4 Tr., 61:19–61:25 (Doc. 449).

know the size and composition of the lines in its mooring system.¹²¹ Paragon does not appear to have possessed such knowledge.

In addition, throughout these months, Paragon never provided Genesis with metered measurements for the line tensions. As to the August 24 report, Gallagher testified that he believed the lines were “very tight” and that it was “reasonable to assume” that the tension figures in the reports were accurate, but he also conceded that he based the line tensions solely on observations, rather than actual measurements.¹²²

Given Paragon’s lack of accurate data about the lines used in its mooring system and the tension on those lines, the Court finds that in connection with its decision process related to Hurricane Harvey, Paragon possessed no reliable information about the strength of its mooring system.

7. Friday, August 25

a. The Breakaway

Around 8:00 a.m. on August 25, two Signet tugs, the SIGNET ARCTURUS and the SIGNET ENTERPRISE, arrived at the Gulf Copper dock to assist the DPDS1. The ENTERPRISE crew boarded the DPDS1 to “visually look at [the moorings] and then help get the other [] tugs tied up.”¹²³ Captain Grant Taylor of the ARCTURUS understood that his job was to “hold the ship to the dock during the storm.”¹²⁴ He did not discuss the feasibility of the job or any potential problems with completing this mission with Snyder or Captain Dale Decker of the ENTERPRISE.¹²⁵

Both vessels’ captains provided status updates to Signet and Paragon throughout the day. As the hurricane approached Corpus Christi, they consistently reported that the mooring arrangement continued to hold the DPDS1. Around 6:00 p.m., the captains reported winds of 80

¹²¹ Barnes Day 2 Tr., 105:23–107:9 (Doc. 449).

¹²² Gallagher Dep., 159:11–19, P.Ex.50 (Doc. 446-6, 42).

¹²³ Taylor Dep., 26:20–23, P.Ex.53 (Doc. 446-9, 9).

¹²⁴ *Id.* at 27:16.

¹²⁵ *Id.* at 28:15–21, 169:9–20, 190:13–191:18.

to 104 miles per hour, although they noted that other vessels in the area blocked the anemometer, so they were providing estimated wind speeds.¹²⁶ At that time, the winds blew from the north-northwest, almost directly at the bow of the vessel.¹²⁷ Each captain reported that “all is well”.¹²⁸

As evening fell, however, the hurricane neared, conditions worsened, and the wind direction rotated in a counterclockwise direction. At 8:42 p.m., the wind speeds peaked at 111 miles per hour, with gusts up to 129 miles per hour, and had shifted to a 45% angle off the port bow of the DPDS1.¹²⁹

At 10:25 p.m., Schenkel confirmed to Koenig that based on the RigStat system onboard the DPDS1, “the wind speed has dropped suddenly at Port Aransas.” He concluded that “the eye of the storm passes.”¹³⁰ At 10:48 p.m., the approximate time of the breakaway, the hurricane’s sustained wind speed at the ANPT2 weather station near the Gulf Copper dock was 92 miles per hour, with gusts of 115 miles per hour.¹³¹ By that time, the hurricane’s winds came from the southwest, at an almost 90% angle to the DPDS1’s bow.¹³² In essence, the winds blew directly perpendicular to the entire portside of the vessel, pushing it away from the dock. Gallagher, the Genesis consultant who inspected the DPDS1 the day before, testified that such a wind represented a “worst case scenario”, as the DPDS1 would “present the largest sail area” under such conditions, placing maximum pressure on the mooring lines.¹³³ At 10:26 p.m., Snyder informed Paragon that the tug boats were “extremely busy holding onto DPDS1 in [132 miles per hour] gusts

¹²⁶ SIGNET ARCTURUS Email, P.Ex.17-A-Part 1 (Doc. 410-31, 287–90).

¹²⁷ Estimated Wind Direction at the Gulf Copper Dock, Wrisk Consulting, S.Ex.133-2 (Doc. 422-12, 5).

¹²⁸ SIGNET ARCTURUS Email, P.Ex.17-A-Part 1 (Doc. 410-31, 287–90).

¹²⁹ Estimated Wind Direction at the Gulf Copper Dock, Wrisk Consulting, S.Ex.133-2 (Doc. 422-12, 25). The weather analysis that Wrisk Consulting performed, which Paragon’s and Signet’s weather experts credited, reported slightly different wind speeds than the NHC. For example, for 9:00 p.m., Wrisk Consulting reports sustained wind speeds of 106 miles per hour, with gusts up to 130 miles per hour, whereas the NHC reported sustained wind speeds of 92 miles per hour, with gusts up to 120 miles per hour. *Id.* at 28; NHC Hurricane Harvey Tropical Cyclone Update, P.Ex.13 (Doc. 410-14, 320). The Court accepts the wind speeds in the Wrisk Consulting report and concludes that any discrepancies reported by the NHC do not affect the legal conclusions.

¹³⁰ Schenkel Email, P.Ex.17-A (Doc. 410-31, 294).

¹³¹ Estimated Wind Direction at the Gulf Copper Dock, Wrisk Consulting, S.Ex.133-2 (Doc. 422-12, 42).

¹³² *Id.*

¹³³ Gallagher Dep., 41:10–42:15, P.Ex.50 (Doc. 446-6) (stating that a beam wind was a “worst case scenario”); see also Schenkel Dep. (Vol. II), 88:21–90:1, P.Ex.45 (Doc. 446-1).

and from what I am hearing, 96-100 mph sustained.”¹³⁴ At 10:44 p.m., the ARCTURUS emailed to both Paragon and Signet representatives: “Can’t really tell much. Visibility is next to nothing.”¹³⁵ That was the final communication before the breakaway.

Captain Taylor recalled that as night fell around 7:30 p.m., and the storm intensified, all he could do was increase the power on the tug boat. The ENTERPRISE and ARCTURUS at the time ran their engines at 75–80% capacity, as the tug boats could not be run at 100% for any period of time without overheating.¹³⁶ The captains of both vessels recalled that the darkness and conditions reduced visibility almost completely. At some point between 10:44 p.m. and 11:00 p.m., as Captain Taylor was reading his instruments, “the ship just took off backwards and it felt like we were flying forwards”.¹³⁷ He immediately told the ENTERPRISE “to go to full power.”¹³⁸ Captain Decker confirmed receiving the message to “give it everything you got.”¹³⁹ He continued, “[T]he next thing I know I’m looking up and I see this – wall come up in the lights of the rig, like, they finally came into the flood lights where I could see the rig and then we hit.”¹⁴⁰ Captain Taylor described the moment as “chaos”, and recalled that the bow of the DPDS1 “came out a bit further”, that the ARCTURUS then “went up against the [Noble] rigs”, and the DPDS1 “just took off and it was going.”¹⁴¹

The ENTERPRISE and ARCTURUS both allied with the Noble semisubmersible oil rigs docked parallel to the DPDS1. The ENTERPRISE sank, and the ARCTURUS sustained considerable damage. Fortunately, while the ENTERPRISE’s crew spent hours in the water and on a powerless tug in the midst of a powerful hurricane, they were successfully rescued the next morning and did not sustain significant physical harm.

¹³⁴ Snyder Email, P.Ex.17-A (Doc. 410-31, 297).

¹³⁵ Koenig Email, P.Ex.17-A-Part 1 (Doc. 410-31, 296).

¹³⁶ Decker Day 4 Tr., 209:10–15 (Doc. 451).

¹³⁷ Taylor Dep., 49:16–17, P.Ex.53 (Doc. 446-9, 14); *see also* JPO, Admissions of Fact ¶ 6.24 (Doc. 314, 36) (“At some point around that time, between 10:30p.m. and 11:00 p.m., the DPDS1 broke free of her moorings.”).

¹³⁸ Taylor Dep., 50:13–14, P.Ex.53 (Doc. 446-9).

¹³⁹ Decker Day 4 Tr., 210:14–19 (Doc. 451).

¹⁴⁰ *Id.*

¹⁴¹ Taylor Dep., 50:20–51:1, P.Ex.53 (Doc. 446-9, 15).

The DPDS1 moved into the Corpus Christi ship channel and eventually grounded on the north side near St. Joseph Island.

b. The Cause of the Breakaway

The parties dispute the cause of the DPDS1's breakaway from the Gulf Copper dock. In general, Signet contends that Paragon relied upon an unreasonably inadequate mooring system to keep the DPDS1 moored. Paragon responds that its mooring system was adequate, that a microburst occurred directly over the DPDS1, and that no reasonably designed mooring system could have kept the DPDS1 in place through such an event. When determining the cause of the breakaway, two factors prove particularly relevant: (1) the strength of the mooring system; and (2) the weather conditions near the DPDS1.

With respect to the mooring system's strength, the parties' experts on the matter—Christopher B. Brown for Paragon and Bill Greiner for Signet—relied exclusively on indirect evidence regarding the type, size, and condition of the lines that held the DPDS1. They had no access to the actual lines, as both the lines that remained on the DPDS1 and the lines that remained on the dock after the hurricane were discarded. And as previously explained, the Genesis reports were not a trustworthy source as to the composition and arrangements of the lines holding the DPDS1. As a result, the experts attempted to reconstruct the mooring system based on photographs that Gallaher and the dock's general manager took before and after the storm, an analysis of the August 24 Genesis report, drawings of the DPDS1, and an affidavit by Koenig. Ultimately, the experts reached consensus as to the likely size and composition of the mooring lines, but disagreed about the condition of those lines at the time of the breakaway.

Paragon's expert, Brown, concluded that the DPDS1's mooring arrangement was actually more robust than what Genesis reported. He calculated the strength of a mooring system with eighteen lines, which included the three lines that Koenig added on August 24, and opined that the mooring system, coupled with the Signet tugs, would have withstood sustained wind speeds of 110 miles per hour, which was significantly higher than the 80 miles per hour estimate that

Genesis reported.¹⁴² When the DPDS1 broke away from the dock, the hurricane's sustained wind speeds were approximately 92 miles per hour, with gusts of 115 miles per hour.¹⁴³ Based on this data, Brown reasoned that the mooring system should have held. As a result, and also relying on data from Paragon's weather expert, Brown concluded that a tornado or wind burst "likely resulted in exceptional mooring loads being placed on the mooring arrangement that it could not withstand."¹⁴⁴

Signet's mooring expert, Greiner, challenged Brown's conclusions. Greiner testified that Brown's computer model simulations assumed ideal conditions, such as accurate wind coefficients, accurate mooring line pretensions, and new or like-new mooring components. He noted that in actuality, many lines in the available photographs showed significant degradation, and that the high stiffness of the Dyneema ropes and wire-chain-wire combinations would prove detrimental in a hurricane. As a result, he opined that Paragon's mooring system possessed a very small margin of safety against mooring line failure.¹⁴⁵ In addition, he concluded that the Signet tug boats reduced the tension on the mooring lines by less than 3% because the thrust of the tugboats, acting close to the water line, could not counter the effect of the perpendicular wind on the port side of the DPDS1.¹⁴⁶

As to weather conditions, Paragon offered the testimony of its expert, Dr. David Mitchell, who opined that a "lightning wind", or microburst, represented the most likely cause of the breakaway. He explained that a mesocyclone is a supercell thunderstorm "embedded in the larger eye wall" of a hurricane, and that such a supercell can create a microburst—i.e., a lightning wind.¹⁴⁷ Signet's meteorological expert, Joseph Spain, described a microburst as "an intensely descending

¹⁴² The Breakaway of the DPDS1, Report of Christopher Brown, P.Ex.17-L-1 (Doc. 424-43, 2).

¹⁴³ Estimated Wind Direction at the Gulf Copper Dock, Wrisk Consulting, S.Ex.133-2 (Doc. 422-12, 42).

¹⁴⁴ The Breakaway of the DPDS1, Report of Christopher Brown, P.Ex.17-L-1 (Doc. 424-43, 1).

¹⁴⁵ Greiner Day 4 Tr., 26:12 –29,4 (Doc. 451); Third report of Bill Greiner dated September 12, 2020, S.Ex.223 (Doc. 426-29, 3); First report of Bill Greiner, March 1, 2019, S.Ex.221 (Doc. 426-27, 4).

¹⁴⁶ First Report of Bill Greiner dated March 1, 2019, S.Ex.221 (Doc. 426-27, 18–21); Third Report of Bill Greiner dated September 30, 2020, S.Ex.223 (Doc. 426-29, 4).

¹⁴⁷ Mitchell Day 3 Tr., 106:9–14 (Doc. 450).

column of air that originates from inside a mesocyclone within a severe thunderstorm.”¹⁴⁸ Both Dr. Mitchell and Dr. Spain agreed on various facts:

- Mesocyclones are typically 2 to 6 miles in diameter;
- Microbursts are less than two and a half miles wide and have peak winds lasting less than 5 minutes;
- Radar can detect mesocyclones, but not microbursts;
- Most mesocyclones do not produce microbursts; and
- Data from the KCRP WSR-88D radar in Corpus Christi can identify, at five minute intervals, the presence or absence of mesocyclones in the general area of the Gulf Copper dock.¹⁴⁹

The experts disagreed, however, as to whether a microburst occurred at or near the Gulf Copper dock at the time of the breakaway. Dr. Mitchell highlighted that the breakaway occurred well after Hurricane Harvey reached its maximum sustained wind speeds of 111 miles per hour, with gusts of 131 miles per hour.¹⁵⁰ At the time of the breakaway, the hurricane’s sustained winds near Port Aransas were 92 miles per hour, with gusts up to 115 miles per hour.¹⁵¹ Dr. Mitchell reasoned that as the DPDS1 did not break away during the height of the storm, the lower wind speeds at the moment of the breakaway could not have caused the mooring system to fail. Rather, he concludes, a sudden and much stronger burst of wind must have caused the event. A microburst represents the most likely cause of such a wind burst.

In contrast, Dr. Spain opined that no data directly evidenced a microburst at any point at the Gulf Copper dock, and that the probability that a microburst occurred is “less than one percent”.¹⁵² For example, he explained that for the time period of 10:30 p.m. to 11:00 p.m. on August 25, the seven composite radar reports show that the closest mesocyclone to the Gulf

¹⁴⁸ Spain Day 5 Tr., 54:22–24 (Doc. 452).

¹⁴⁹ Mitchell Day 3 Tr., 145–148, 163 (Doc. 450); Spain Day 5 Tr., 53–56 (Doc. 452).

¹⁵⁰ Mitchell Day 3 Tr., 99:15–17 (Doc. 450).

¹⁵¹ Mitchell Day 3 Tr., 142:20–143:2 (Doc. 450); Spain Day 5 Tr., 39:17–40:1 (Doc. 452).

¹⁵² Spain Day 5 Tr., 68:14–70:23 (Doc. 452).

Copper dock was too distant for even a mesocyclone with an above-average-diameter to have impacted the DPDS1.¹⁵³

Based on the trial record, the Court finds that the most likely cause of the DPDS1's breakaway stemmed from hurricane winds of about 92–96 miles per hour exceeding the mooring system's capacity. The evidence does not support the occurrence of a microburst near the DPDS1 at the time of the breakaway. Rather, the winds, at the moment when they blew almost directly perpendicular to the port side of the vessel, pushed the DPDS1 away from the dock and applied greater force against the DPDS1 than the mooring lines could withstand. Although the reported wind speeds were higher at an earlier point that evening, they also blew at an angle relative to the DPDS1, reducing the effective strain on the mooring system. At the time of the breakaway, the wind speed coupled with its direction (perpendicular to the port side) overwhelmed the mooring system, even with the Signet tugs attempting to push the DPDS1 toward the dock.

8. Saturday, August 26, through Monday, August 28: The Ship Channel

Within half an hour of breaking away from the Gulf Copper dock, the DPDS1, unmanned and without power, quickly drifted across the Corpus Christi ship channel and grounded near St. Joseph Island.¹⁵⁴

The morning after the breakaway, Schenkel stated that “we will leave the rig on the beach over the next [few] days anticipating the storm will hit the rig again within 72 hours.”¹⁵⁵ Paragon and Signet discussed whether Signet tug boats could help monitor the DPDS1 at her grounded location. During these discussions, Paragon requested that Signet provide its services under the MCA. But Signet again stated that the in-harbor ship assist services would “continue to be governed by our tariff”.¹⁵⁶

¹⁵³ *Id.* at 59–63.

¹⁵⁴ Roy Aff., P.Ex.19-B (Doc. 439, 2); JPO, Admission of Fact ¶ 44 (Doc. 314, 39).

¹⁵⁵ Schenkel Email, S.Ex.89 (Doc. 420-8, 1).

¹⁵⁶ Oliver and Reid Emails, S.Ex.126 (Doc. 422, 1–3).

Snyder testified that Paragon asked Signet to “keep an eye on” the DPDS1 and “monitor where she was going”.¹⁵⁷ Koenig agreed that Signet would “keep an eye on” the DPDS1, but he recalled more specificity—i.e., that Signet would “keep one of their tugs at our ship watching over [the vessel].”¹⁵⁸ The Signet tug would “stay there and monitor the ship and stay close by to it”, in order to “to prevent that [DPDS1] from drifting.”¹⁵⁹ In addition, at night, the Signet tug could keep a light on the DPDS1 to alert passing vessels and prevent them from alliding with the DPDS1. Schenkel recalled that he or Koenig spoke with Snyder because they “wanted to have a tug close by to at least to report whether the rig was moving or not”.¹⁶⁰

Rear Admiral Joel Whitehead testified that maintaining a tug boat aside the DPDS1 “was a prudent thing to do”, and believed that the port captain may have required as much.¹⁶¹ He expected that the Signet tug boat would have remained “close” to the DPDS1 to be able to hold it in place. As he read the tug boat’s log books, an entry to “Hold DPDS1” was consistent with his understanding of what the port captain required and what Paragon prudently would have hired Signet to do.¹⁶²

Signet assigned the tug boat CONSTELLATION to the job. Captain Tringali maneuvered the vessel close to the DPDS1, but then reported that lines dangling off the vessel rendered it impossible for the tug boat to safely come alongside the DPDS1 and remain there to keep the drillship from moving. As a result, the CONSTELLATION did not station itself next to the DPDS1, but remained at a nearby dock. The tug boat’s crew enjoyed line of sight of the DPDS1 during the day, and monitored the DPDS1 at night by radar. The crew could respond to any movement within 20 minutes due to the short distance between the dock and the DPDS1’s stranded location. On the morning of Sunday, August 27, Signet confirmed that until Paragon personnel were able to

¹⁵⁷ Snyder Day 5 Tr., 214:4-13 (Doc. 452).

¹⁵⁸ Koenig Day 1 Tr., 251:24-252:2 (Doc. 448).

¹⁵⁹ *Id.* at 252:5-13.

¹⁶⁰ Schenkel Dep. (Vol. II), 145:6–8, P.Ex.45 (Doc. 446-1, 120).

¹⁶¹ Admiral Whitehead Day 3 Tr., 202:20-22 (Doc. 450).

¹⁶² *Id.* at 202-203; Marine Operation Log, P.Ex.27 (Doc. 441-8).

travel to Harbor Island, Signet would monitor the DPDS1. The parties agree that during this time, the DPDS1 could be detected visually, by radar, and by GPS.

On the Saturday and Sunday after Hurricane Harvey made landfall, the weather reports anticipated that the storm had the “potential to move back into the gulf next week.”¹⁶³ And around 4:00 a.m. on Monday, August 28, the NHC warned that Tropical Storm Harvey was moving back toward the coast. The reports indicated that “rain accumulations of 5 to 15 inches” were expected to fall on the middle Texas coast, and that “[t]he combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline.”¹⁶⁴ At mid-morning, the CONSTELLATION traveled by the DPDS1, visibly inspected the vessel, and returned to the Gulf Copper dock.¹⁶⁵ The drillship was “hard aground, had a starboard list, [and] broken lines”.¹⁶⁶

At 6:00 p.m., Captain Upton relieved Captain Tringali on the CONSTELLATION. Captain Tringali briefed the incoming captain, telling him that “we were keeping an eye on the drilling rigs, the Signet ENTERPRISE, the Signet ARCTURUS, and the drillship.”¹⁶⁷ The DPDS1 could be seen from their vantage point during the day with binoculars, but there were no lights in the channel, so it was “pitch black” at nightfall.¹⁶⁸ Captain Upton testified that at night, he had to rely solely on radar to monitor the ship, and he would check the radar “every 30 to 60 seconds.”¹⁶⁹

Around 7:00 p.m. on Monday evening, the DPDS1 refloated when Hurricane Harvey’s return to the Gulf of Mexico caused the water level in the channel to rise and the wind speeds to increase, as predicted by the weather advisories early that morning.¹⁷⁰ RigStat data recorded the

¹⁶³ WeatherOps Tropical Daily Planner – Atlantic – Saturday, August 26, 2017, P.Ex.13 (Doc. 410-14, 398–99).

¹⁶⁴ NHC Tropical Storm Harvey Advisory # 32A, P.Ex.13 (Doc. 410-14, 503–04).

¹⁶⁵ *Deck Log*, P.Ex.27 (Doc. 441-11, 2).

¹⁶⁶ Capt. Upton Day 4 Tr., 252:3–6 (Doc. 451).

¹⁶⁷ *Id.* at 250:18–235.

¹⁶⁸ Capt. Tringali Day 3 Tr., 290:3 (Doc. 450).

¹⁶⁹ Capt. Upton Day 4 Tr., 250:24–251:3 (Doc. 451).

¹⁷⁰ Koenig Day 1 Tr., 279–81 (Doc. 448).

DPDS1's movements, reflecting that the vessel refloated and drifted across the channel from approximately 7:00 p.m. to 11:00 p.m.–i.e., over a four-hour period.¹⁷¹

The CONSTELLATION's crew failed to detect the DPDS1's initial movements, and did not become aware that the DPDS1 was drifting until the United States Coast Guard notified Signet Captain Josh Macklin, one of the two points of contact between the Coast Guard and Signet at that time, who attempted “two or three times” to contact Captain Upton.¹⁷² Captain Macklin finally reached Captain Upton, who reported that he was “chasing it down.”¹⁷³ Captain Upton testified that even after getting the call, he did not see any movement by the DPDS1 reflected on the radar.¹⁷⁴

In the end, the CONSTELLATION was unable to prevent the DPDS1 from alliding with the University of Texas's research pier on the south side of the channel, resulting in significant damage to the pier. After the allision, Captain Upton maneuvered the CONSTELLATION up to the DPDS1's portside and pinned the DPDS1 against the shore. In the ensuing days, Signet provided Paragon with three tugs to maintain the DPDS1 in place until the drillship could be towed to another dock.

As has been noted, Paragon equipped the DPDS1 with Rigstat GPS, which reported the vessel's exact location and movement. The Rigstat device sounded an alarm if the DPDS1 moved. Schenkel and another Paragon employee, Richard Sporn, became aware that the DPDS1 had experienced initial movements on the morning of August 28.¹⁷⁵ Despite this knowledge, at no time during that day did they notify Signet, the Coast Guard, the local Pilot's Association, or the Port of Corpus Christi that the Rigstat device was suggesting movement by the DPDS1.

¹⁷¹ Roy Aff., Paragon Trial Tx. P.Ex.19-B (Doc. 439).

¹⁷² Capt. Macklin Dep., 48-50, 57:20–24, P.Ex.54 (Doc. 446-10, 14–17).

¹⁷³ *Id.* at 53:4.

¹⁷⁴ Capt. Upton Day 4 Tr., 253:5–19 (Doc. 451).

¹⁷⁵ Schenkel Dep. (Vol. II), 110:21 111:13, P.Ex.45 (Doc. 446-1, 112); Schenkel Email, S.Ex.91 (Doc. 420-10) (“Richard, the trim and list suddenly started changing. Please check location. Sent me recent file with coordinates.”).

9. Relocating the DPDS1

Once Hurricane Harvey fully cleared the area, Paragon began the process to move the DPDS1 to the Gulf Marine Fabricators graving yard at Port Aransas.¹⁷⁶ Paragon relied on three Signet tugs to keep the DPDS1 in place on the ship channel shore during the week after the allision. Signet invoiced for those service applying the Tariff rate, and Paragon paid the invoices in full.¹⁷⁷

On September 26, Signet tugs towed the DPDS1 from Gulf Marine Fabricators graving yard at Port Aransas to International Shipbreaking yard at Port of Brownsville. Shortly thereafter, Paragon had the drillship dismantled.¹⁷⁸

II. Procedural History and Alleged Damages

The Court possesses jurisdiction under the admiralty and maritime laws of the United States. *See* 28 U.S.C. § 1333; FED. R. CIV. PROC. 9(h). Venue lies in this judicial district under 28 U.S.C. § 1391(b)(2) because a substantial part of the events or omissions giving rise to the claims occurred in this district.

A. Complaints in Limitation

In September 2017, Paragon filed its Complaint in Limitation. Signet filed an Answer and counterclaims.

In December 2017, Signet filed a Complaint in Limitation as owner of the ENTERPRISE. Three months later, Signet filed a Complaint in Limitation as owner of the ARCTURUS. In each matter, Paragon submitted a claim along with an Answer and Counterclaims.

On March 7, 2018, the Court consolidated the three limitation actions into this proceeding. Those three cases have proceeded in tandem and were tried as a consolidated matter.

Three other parties filed claims: (1) Noble Drilling (U.S.) LLC; Noble Bob Douglas LLC; and Noble Drilling NHIL LLC; (2) Certain Underwriters and Insurers of the University of Texas as the Owner of the Port Aransas Research Pier and The University of Texas as Owner of the

¹⁷⁶ Matthews Daniel Interim Report, P.Ex.10-B (Doc. 409-46, 19).

¹⁷⁷ Signet Invoice 517935, S.Ex.293 (Doc. 433-4).

¹⁷⁸ Matthews Daniel Interim Report, P.Ex.10-B (Doc. 409-46, 8).

Marine Science Institute; and (3) Gulf Copper & Manufacturing Corporation and Gulf Copper Ship Repair, Inc. Each of these entities entered into settlement agreements with Paragon and Signet and were dismissed from this matter.

In November 2017, at the inception of this case, the Court approved the value of Paragon's interest in the DPDS1 and its pending freight in the amount of \$150,000, and added \$18,000 in interest to reflect a total limitation fund of \$168,000.¹⁷⁹ Paragon deposited this amount into the registry of the Court. This amount was based on the post-casualty fair market value of the DPDS1, as the vessel lay in the ship channel. In March 2019, Signet moved to increase Paragon's limitation fund on the grounds that the DPDS1 was sold for approximately \$2.5 million six weeks after the incident.¹⁸⁰ The Court denied the motion, finding that the actual sales price did not controvert the limitation value of \$150,000.¹⁸¹

The Court also made findings as to the limitation fund in the limitation actions that Signet filed as the owner of the ENTERPRISE and the ARCTURUS. As to the ENTERPRISE, the Court approved the value of Signet's interest in the tug and its pending freight in the amount of \$536,738.58, with interest at a rate of 6% per annum.¹⁸² As to the ARCTURUS, the Court approved the value of Signet's interest in the tug and its pending freight in the amount of \$11,536,738.58, with interest at a rate of 6% per annum.¹⁸³

In July 2018, Paragon initiated a Third-Party Complaint against the American Club, which filed an Answer.¹⁸⁴ The American Club served as the protection and indemnity (P&I) marine insurer for Signet at all times relevant to this lawsuit. On February 14, 2017, the American Club issued a Certificate of Entry with respect to the ENTERPRISE and the ARCTURUS for the 2017/18

¹⁷⁹ Amended Order Approving Plaintiff in Limitation's Ad Interim Stipulation for Value Directing Issuance of Notice and Restraining Prosecution of Claims (Doc. 9).

¹⁸⁰ Signet's Motion for an Order to Increase Paragon Asset Company Ltd.'s Limitation Fund (Doc. 108).

¹⁸¹ Order (Doc. 173).

¹⁸² Signet Maritime Corporation as the Owner of the Tug SIGNET ENTERPRISE v. Liability, Civil Case No. 1:17cv247 (Order Doc. 6, Dec. 19, 2017).

¹⁸³ Signet Maritime Corporation as the Owner of the Tug SIGNET ARCTURUS v. Liability, Civil Case No. 1:18cv035 (Order, Doc. 7, Feb. 28, 2018).

¹⁸⁴ JPO, Admission of Fact ¶ 32 (Doc. 314, 37). (See Docs. 1, 10, 11, 74, 89, 92, 299, 300, 201, 372, and 373).

policy year. Paragon alleges that under the MCA, Signet bore responsibility to identify Paragon as an insured under Signet's insurance policy with the American Club. American Club responds that as the Tariff and not the MCA applies to the services that Signet provided, the American Club bears no insurance obligation as to Paragon.

B. Alleged Damages

Five vessels and two structures sustained damages: Paragon's DPDS1, Signet's tug boats the ARCTURUS and the ENTERPRISE, the Noble semisubmersible oil rigs DANNY ADKINS and JIM DAY, the University of Texas's research pier, and the Gulf Copper pier. The parties entered into settlements as to Noble, the University of Texas, and Gulf Copper, and Paragon and Signet have reserved the issue of recoverability of any settlement payments until the Court has ruled on the initial liability issues. The Court makes no findings as to the amount of the damages to the DANNY ADKINS, the JIM DAY, or the piers.

With respect to the DPDS1 and the two tug boats, Paragon and Signet each seek various categories of alleged damages. As to the DPDS1, Paragon seeks \$4,135,401.00 in damages, comprised of the following:

Category	Amount¹⁸⁵
Tugs for Tow to Yard & from Yard to Port of Brownsville	\$1,072,473.00
Regulatory Survey/Engineering Fees	\$ 9,953.00
Reactivation Survey by Insurance Agents	\$ 12,099.00
Project Management Team Labor	\$2,871.00
Shipyard Labor	\$2,934,642.00
Consulting Fees for Third Party Engineering Companies	\$103,363.00

¹⁸⁵ Paragon's and Signet's Revised Stipulations of Fact as to Their Contentions Regarding Damages (Doc. 392, 2–4).

As to the ARCTURUS, Signet seeks \$2,364,059.87 in damages, comprised of the following:

Category	Amount¹⁸⁶
Salvage costs	\$ 37,055.74
Surveyor expenses	\$ 54,225.74
Repair costs	\$ 1,517,311.08
Loss of charter hire damages	\$ 755,467.31

As to the ENTERPRISE, Signet seeks \$6,969,373.51 to \$7,469,373.51 in damages, comprised of the following:

Category	Amount¹⁸⁷
Wreck removal services	\$1,735,607.78
Surveyor expenses	\$41,412.17
Fair market replacement costs	\$5,150,000.00 – \$5,650,000.00
Loss of charter hire damages	\$42,353.56

III. CONCLUSIONS OF LAW

Paragon and Signet each claim that the other's negligence proximately caused the damages resulting from the DPDS1's breakaway from the Gulf Copper dock when Hurricane Harvey made landfall. In particular, Signet argues that Paragon unreasonably failed to act with sufficient speed to evacuate the DPDS1 from the port, and having failed to do so, that Paragon utilized an inadequate mooring system to keep the vessel at the dock during the storm. In response, Paragon contends that it acted reasonably when considering whether to tow the DPDS1 out to sea, and that unpredictable weather conditions and port events thwarted its efforts. In addition, Paragon argues that Signet's tug boats failed to fulfill their contractual obligations with respect to the DPDS1.

The two parties devote significant argument to whether the MCA or the Tariff governs Signet's provision of tug boat services during Hurricane Harvey. This issue primarily impacts the indemnity issues that the parties have raised. The Court will first determine the apportionment

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

of liability as between Paragon and Signet, and will then turn to whether the MCA or the Tariff governed during the relevant events.

A. Apportionment of Liability

The Limitation of Liability Act provides that “the liability of the owner of a vessel for any claim, debt, or liability . . . arising from . . . any act, matter, or thing, loss, damage, or forfeiture, done, occasioned, or incurred, without the privity or knowledge of the owner . . . shall not exceed the value of the vessel and pending freight.” 46 U.S.C. § 30505(a)–(b); *see also SCF Waxler Marine, L.L.C. v. Aris TM/V*, 24 F.4th 458, 473 (5th Cir. 2022). “Under the Act, a party is entitled to limitation only if it is ‘without privity or knowledge’ of the cause of the loss.” *In re Hellenic Inc.*, 252 F.3d 391, 394 (5th Cir. 2001) (quoting *Brunet v. United Gas Pipeline Co.*, 15 F.3d 500, 504 (5th Cir. 1994)); *see Farrell Lines Inc. v. Jones*, 530 F.2d 7, 10 (5th Cir. 1976) (explaining that the vessel owner must have privity or knowledge of the “acts of negligence or conditions of unseaworthiness that caused the accident”). “[I]f the vessel’s negligence or unseaworthiness is the proximate cause of the claimant’s loss, the [ship owner] must prove it had no privity or knowledge of the unseaworthy conditions or negligent acts.” *Trico Marine Assets Inc. v. Diamond B Marine Servs. Inc.*, 332 F.3d 779, 789 (5th Cir. 2003). When a corporation owns the vessel, “knowledge . . . is judged not only by what the corporation’s managing officers actually knew, but also by what they should have known.” *Id.* at 789–90. That is, if the unseaworthy “condition could have been discovered through the exercise of reasonable diligence,” a corporate owner is deemed to have knowledge of it and cannot limit its liability. *In re Omega Protein, Inc.*, 548 F.3d 361, 371 (5th Cir. 2008) (quoting *Brister v. A.W.I., Inc.*, 946 F.2d 350, 356 (5th Cir. 1991)). “A corporation ‘is charged with the knowledge of any of its managing agents who have authority over the sphere of activities in question.’” *In re Signal Int’l, LLC*, 579 F.3d 478, 496 (5th Cir. 2009) (quoting *Petition of Kristie Leigh Enters. Inc.*, 72 F.3d 479, 481 (5th Cir. 1996)).

Since 1975, courts in admiralty actions have applied the concept of comparative fault to determine the respective liability for damages among the parties: “We hold that when two or more parties have contributed by their fault to cause property damage in a maritime collision or stranding, liability for such damage is to be allocated among the parties proportionately to the comparative degree of their fault, and that liability for such damages is to be allocated equally only when the parties are equally at fault or when it is not possible fairly to measure the comparative degree of their fault.” *United States v. Reliable Transfer Co.*, 421 U.S. 397, 411 (1975). When making this determination, a court applies a negligence analysis.

1. Maritime Negligence

“The elements of a maritime negligence cause of action are essentially the same as land-based negligence under the common law.” *Withhart v. Otto Candies, LLC*, 431 F.3d 840, 842 (5th Cir. 2005). To establish maritime negligence, “a plaintiff must demonstrate that there was (1) a duty owed by the defendant to the plaintiff; (2) a breach of that duty; (3) injury sustained by the plaintiff; and (4) a causal connection between the defendant’s conduct and the plaintiff’s injury.” *GIC Servs., L.L.C. v. Freightplus USA, Inc.*, 66 F.3d 649, 659 (5th Cir. 2017). The element of causation requires that the negligence be “a substantial factor” in the injury, although “[t]he term ‘substantial factor’ means more than ‘but for the negligence, the harm would not have resulted.’” *Donaghey v. Ocean Drilling & Exploration Co.*, 974 F.2d 646, 649 (5th Cir. 1992) (quoting *Spinks v. Chevron Oil Co.*, 507 F.2d 216, 223 (5th Cir. 1975)). In addition, the foreseeability of the damages can affect the proximate-cause determination. See *In re Signal Int’l, LLC*, 579 F.3d at 490 n.12.

In the seminal decision *The Louisiana*, the Supreme Court articulated that a shipmaster must “use reasonable skill and care to prevent mischief to other vessels, and the liability is the same whether his vessel be in motion or stationary, floating or aground In all these circumstances the vessel may continue to be in his possession and under his management.” *The Louisiana*, 70 U.S. 164, 169 (1865); see also *Boudoin v. J. Ray McDermott & Co.*, 281 F.2d 81, 85

(5th Cir. 1960) (“[A shipmaster] has . . . a special duty to take all reasonable steps consistent with safety to [his] ship and her crew, to avoid or minimize the chance of harm to others.”). The shipmaster owes the duty to those who would be foreseeably injured should the shipmaster fail to take reasonable steps to keep its vessel from harming others or their property. *See* Prosser and Keeton on Torts, Duty § 53 (5th ed. 1984); Harper, James & Gray, The Law of Torts, Scope of Duty in Negligence Cases § 18.2 at 655 (2d ed. 1986) (“Duty . . . is measured by the scope of the risk that negligent conduct foreseeably entails.”). Of particular relevance to the present case, the Fifth Circuit has explained that “[a]llision with fixed structures is one of the principal risks of a vessel, moored inland, that breaks from its negligently executed moorings.” *In re Signal Int'l, LLC*, 478 F.3d at 492.¹⁸⁸

In cases involving storms, a court determines whether the vessel owner “took reasonable precautions under the circumstances as known or reasonably to be anticipated”. *Petition of U.S.*, 425 F.2d 991, 995 (5th Cir. 1970). The shipmaster must act reasonably in the assessment of “the severity of the impending storm” and must undertake “reasonable preparations in light of such anticipation”. *Id.* A court holds the shipmaster to the standard of reasonableness of prudent people familiar with the ways and vagaries of the sea. *Id.* With respect to docked vessels, three factors prove particularly relevant to determine the scope of the duty that the shipmaster owes:

“Since there are occasions when every vessel will break from her moorings, and since, if she does, she becomes a menace to those about her; the owner's duty, as in other similar situations, to provide against resulting injuries is a function of three variables: (1) The probability that she will break away; (2) the gravity of the resulting injury, if she does; (3) the burden of adequate precautions.”

United States v. Carroll Towing Co., 159 F.2d 169, 174 (2d Cir. 1947).

In the present matter, the Court identifies two discrete events for which liability must be apportioned: (1) the initial breakaway of the DPDS1 and the damages that Paragon, Signet, Noble, and Gulf Copper incurred immediately after that breakaway; and (2) the re-floating of the DPDS1

¹⁸⁸ Neither Paragon nor Signet challenge that the property owners involved in this consolidated action fall within the entities “foreseeably injured” from the DPDS1 breaking away from the dock.

on August 28 and the damages caused by the allision of the drillship with the University of Texas research pier.

2. The Breakaway of the DPDS1

The Court concludes that Paragon failed to take reasonable precautions under the circumstances as known or that it reasonably could have anticipated before Hurricane Harvey made landfall in Port Aransas. A key factor as to whether Paragon acted reasonably is evaluating Paragon's assessment of the probability that the DPDS1 would break away from the dock in light of the anticipated strength of the storm. As to this factor, Paragon's assessment proved unreasonable on two important data points—the mooring system's strength, and the hurricane's projected path, anticipated force, and arrival date.

As to the first data point, the trial record demonstrates that when Paragon considered whether and when to tow the DPDS1 out to sea as Hurricane Harvey approached, company decision makers knew or should have known that they possessed inaccurate information about the mooring system installed to keep the DPDS1 docked. In other words, Paragon had no reliable basis to determine whether the mooring system could withstand a tropical storm, much less a hurricane.

Between May and June 2017, Paragon contracted Genesis to assess various mooring systems. Paragon relied on those analyses to conclude that it should tow the DPDS1 out to sea if a tropical system threatened to strike the Port Aransas area with anticipated wind speeds of at least 63 miles per hour. Paragon's reliance on the Genesis analysis, however, proved unreasonable. The initial Genesis report analyzed a 20-line system, but the record does not even suggest that Paragon ever used that many lines to moor the drillship. As for the final, August 24 report, experts from both parties agreed that Paragon provided inaccurate information to Genesis. The experts compared the mooring lines that Genesis assumed for its analysis—and which Paragon provided—against the available information about the lines actually used during the hurricane. They identified material discrepancies between the data that Paragon reported to

Genesis, and the lines that most likely moored the DPDS1. In particular, on August 24, Paragon asked Genesis to assume a mooring system with thirteen 3-inch Dyneema lines and two wire-chain-wire combinations. The record reflects that Paragon never utilized such a system, and that the actual lines included at least some weaker polyester lines. In addition, Paragon also asked Genesis to assume certain tension values for the lines, but conceded that it never measured the tension, rendering any assumed values suspect. In short, both sides' experts agreed that on August 24, Genesis assessed a mooring system that did not exist. In fact, no evidence clearly demonstrates that *any* of the Genesis reports reflected a mooring system that Paragon actually used.

Paragon knew—or should have known—that it provided faulty information to Genesis. While some data points have inherent uncertainties, such as the impact of normal wear and tear on mooring lines over time, other information is relatively easy to confirm, such as the type of line used and its size. As shipmaster, Paragon held the best position to understand the system meant to keep the DPDS1 at the dock. But it failed to obtain such data and, as a result, had no reasonable grounds to rely upon any of the Genesis evaluations.¹⁸⁹

One of a shipmaster's primary responsibilities is to restrain a docked vessel adequately, so that the vessel does not break away from the dock and impact nearby property. *See Carroll Towing Co.*, 159 F.2d at 172. Vessel owners can use a variety of restraining devices to fulfill this duty. The shipmaster does not have to create a perfect system, but must install a reasonable system considering the risks of a breakaway at that location. Fulfilling that duty requires that a vessel owner possess an adequate understanding of the installed system. Absent an accurate understanding of the mooring system actually in place, a vessel owner has no basis on which to conclude whether its mooring system can withstand an incoming storm. In essence, a shipmaster without an accurate understanding of its own mooring system leaves the results to chance. In the

¹⁸⁹ No evidence indicates that Paragon gathered such information, but then intentionally provided different data to Genesis.

current matter, Paragon took this chance, and in doing so, fell short of fulfilling its duties under maritime law.

As to the second data point, Paragon also acted unreasonably when assessing the strength and anticipated arrival of Hurricane Harvey. It is instructive to recall Paragon's own assessment regarding the conditions that would require towing the DPDS1 out to sea. On August 2, Schenkel had communicated his view on this issue: “[T]o be sure we leave port in time, the word ‘hurricane’ needs to be broadly interpreted as a severe storm.”¹⁹⁰ He recommended that “the DPDS1 should depart ([3] days prior land fall) when a storm is approaching with a predicted wind speed of approx. [63+ miles per hour]”.¹⁹¹

In late August, Paragon disregarded Schenkel's own recommendation. Monday, August 21, proved the critical moment. By 9:00 a.m. that morning, WeatherOps had released two reports. The 4:00 a.m. report predicted that the tropical system would reach 65 mile per hour winds, striking northern Mexico on Friday. Six hours later, the WeatherOps report placed Port Aransas well within the storm's long-term cone of uncertainty, although the predicted landfall remained in northern Mexico. That report reduced the anticipated maximum winds to 57 miles per hour. Two hours later, and based on these reports, Schenkel communicated to Koenig that while concern existed, they had time before making a definitive decision regarding the DPDS1: “It seems we don't have to do anything yet.”¹⁹² He estimated that they had 24 hours to make a decision, “since the speed is close to the acceptable speed of [63 miles per hour] to start preparing departure.” Yester viewed that morning's reports with even greater optimism, messaging that he did not “see where we are in any danger unless something causes a drastic turn to the North.”¹⁹³ In contrast, Koenig testified that his recommendation that morning was to “take the DPDS1

¹⁹⁰ Schenkel Email, S.Ex.271 (Doc. 429-10, 1-2).

¹⁹¹ *Id.*; see also Schenkel Dep. (Vol. I), 77:9–21, P.Ex.45 (Doc. 446-1, 21).

¹⁹² Schenkel Email, S.Ex.271 (Doc. 429-10, 4).

¹⁹³ Yester Email, P.Ex.17-A-Part 1 (Doc. 410-31, 252).

out".¹⁹⁴ He agreed that Paragon should have made the decision to evacuate "immediately".¹⁹⁵ Instead, the decisionmakers decided "to wait and watch the weather for a little bit longer to see if we really need to carry out that plan or not."¹⁹⁶

Schenkel and Yester reached their conclusions despite Port Aransas being within the cone of uncertainty, and despite the fact that one report that morning had predicted maximum wind speeds exceeding the 63 miles per hour benchmark. While the second report decreased the estimated maximum wind speed to 57 miles per hour, the two reports, taken together, in no manner communicated the absence of "any danger". And six hours later, the next WeatherOps report erased any doubts. Issued around 4:00 p.m., this report forecasted that the system would make landfall in northern Mexico on Friday, August 25, with 70 mile per hour winds.¹⁹⁷ The Corpus Christi area remained well within the cone of uncertainty. Schenkel and Yester do not appear to have communicated about this report, but based on Schenkel's August 2 recommendation, this new information would have decidedly indicated that Paragon should tow the DPDS1 out to sea. Rather than make such a decision, however, Paragon took no concrete steps in response to the updated information.

Not only did Paragon's decision to wait run counter to Schenkel's earlier guidance, it also was based on a faulty premise—i.e., that the Genesis evaluation was accurate. It was not, and Paragon should have known as much. Given that Paragon did not have a reasonable basis on which to gauge the strength of its mooring system, the only reasonable decision would be to immediately evacuate the DPDS1 once the Port Aransas area fell within the cone of uncertainty for any type of major storm, and certainly including a tropical storm. That moment arrived by no later than the afternoon on Monday, August 21. Paragon has provided no compelling justification for a delay beyond that point.

¹⁹⁴ Koenig Day 2 Tr., 41:13 (Doc. 449).

¹⁹⁵ *Id.* at 43:13–15.

¹⁹⁶ *Id.* at 42:11.

¹⁹⁷ WeatherOps Tropical Disturbance Harvey Advisory # 24, P.Ex.13 (Doc. 410-14, 93).

Paragon's reactions to the Monday reports unquestionably delayed the evacuation of the DPDS1, and more likely than not made the difference between towing the DPDS1 out to sea and having the drillship ride out the storm at its dock. First, Schenkel's and Yester's perspectives demonstrated a lack of urgency and full appreciation for the dangers that the tropical system posed. At important junctures, they interpreted the weather reports in an overly optimistic manner. For example, on Monday, they focused on the 9:00 a.m. report, which contained the lowest forecasted maximum winds, instead of the prior and subsequent reports with higher forecasted maximum winds. The next day, they chose to believe that the tropical system would continue on a northward path, making landfall well north of Corpus Christi and placing the DPDS1 on the "clean side" of the storm, even though the Gulf Copper dock lay squarely within the cone of uncertainty. Their interpretation of the reports led them to reject Koenig's recommendation to immediately issue an evacuation order and delayed urgent actions. For example, to obtain a certain departure time with the port authorities, Paragon had to issue an evacuation order. Until then, even if Signet communicated its readiness to tow out the drillship, Paragon could not ensure an available departure time. Paragon did not issue the evacuation order until Wednesday. By then, many factors lay beyond its control, but only due to Paragon's own delayed response. Signet Captain Jay Rivera testified that if Paragon had placed an evacuation order on Monday, there would have been a "pretty good chance and a high likelihood" that the DPDS1 would have been towed out to sea before Hurricane Harvey's arrival.¹⁹⁸ Yester agreed that if Paragon had issued the evacuation order on Tuesday, the DPDS1 "might have gotten out".¹⁹⁹ A reasonable shipmaster would understand the urgency to make an evacuation decision, as the "chances [get] smaller as time passes."²⁰⁰ Instead of acting with urgency, Paragon chose to wait, hoping for a favorable outcome, despite the unambiguous dangers that the reports communicated.

¹⁹⁸ Capt. Rivera Day 3 Tr., 283:12 (Doc. 450).

¹⁹⁹ Yester Day 1 Tr., 109:9–13 (Doc. 448).

²⁰⁰ Capt. Rivera Day 3 Tr., 283:23 (Doc. 450).

In addition, the experience of Rowan strongly suggests that had Paragon made the definitive decision on Monday morning to evacuate its drillship, it is probable that Paragon would have succeeded in doing so. Rowan moored two drillships near the DPDS1 at the Port of Corpus Christi. On Monday morning, Rowan decided to evacuate those vessels, and ultimately succeeded in doing so.²⁰¹ Paragon could have followed a similar course. Notably, of the five drillships docked along the Texas Gulf Coast, the DPDS1 was the only one not evacuated before Harvey made landfall. Both Noble and Rowan successfully evacuated two of their respective docked drillships.

Paragon relies on Yester's testimony that on Monday morning, he "decided to start whatever process it took to get port clearance and tugboats and everything ready to go",²⁰² in case Paragon chose to evacuate the drillship. While Yester appears to have taken some steps, he did not file the Deadship Tow Application or communicate effectively with the port authorities. He agreed that on Monday or Tuesday, he could have issued an order of evacuation, and then rescinded it if the weather forecast improved. But he did not take this route. At best, on Tuesday, he issued an internal "order to get ready to go", rather than the official order of evacuation, which Paragon did not issue until Wednesday.²⁰³ This delay precluded Paragon from obtaining a certain departure zone for the drillship.²⁰⁴

Paragon also argues that it acted in a timely manner, but that other factors thwarted its decision to evacuate the DPDS1. In particular, Paragon highlights the Navy's decision on Thursday, August 24, to evacuate several of its vessels, as well as another company's vessels having priority over Paragon's for leaving the port. While it is true that these circumstances arose on Thursday, it is equally true that prudent shipmasters foresee such situations and factor them into their decision-making timetable. A prudent shipmaster docked at a port that houses naval

²⁰¹ *Id.* at 300:3–21 (Doc. 450).

²⁰² Yester Day 1 Tr., 71:7–9 (Doc. 448).

²⁰³ *Id.* at 108:25–109:1 (Doc. 448).

²⁰⁴ In addition, Paragon did not direct its in-house counsel to begin negotiating with his counterpart at Signet until Wednesday. This delay further reveals a wait-and-see approach, rather than a level of urgency proportional to the increasing threat from the storm.

vessels should anticipate that the Navy may evacuate before a threatening storm, and that those vessels command priority over commercial vessels. A prudent shipmaster ascertains whether other vessel owners possess port priority, so as to ensure that it properly weighs the additional time required to evacuate its own vessels. Paragon appears to have been surprised by these developments, but any surprise only underscores that Paragon failed to appreciate and take into account factors that reasonable shipmasters would consider.

a. Paragon's Defenses

Paragon relies on three primary defenses to reduce or negate its responsibility for the damage that the DPDS1 caused after it broke away from the dock. The Court finds each argument unpersuasive.

i. Signet's Negligence

Paragon first contends that Signet did not exercise reasonable care when providing tug boat services to the DPDS1 at the dock, and that Signet's negligence led to the damages to the various vessels and piers. The trial record, however, undermines this argument. No evidence demonstrated that the Signet tugs ENTERPRISE and ARCTURUS rendered services negligently. The tug boats possessed z-thrust propulsion systems, which enabled them to direct thrust in any direction. With such systems, the tug boats could push the DPDS1 against the dock irrespective of whether the tug boats themselves were stationed perpendicular to the drillship. During the storm, the tug boats reported that as the storm intensity increased, the captains of the two vessels increased the thrust level. At the time of the breakaway, the captains ran their tug boats at 80% thrust capacity. No witness testified that this thrust level was unreasonable. On the contrary, Captain Taylor testified that no tug boat captain operates the vessel at 100% capacity for any length of time, due to the stress that doing so places on the engine.²⁰⁵ In short, the evidence at

²⁰⁵ Taylor Dep., 40:12–25, P.Ex.53 (Doc. 446-9, 12).

trial demonstrated that Signet's captains operated their tug boats reasonably under the circumstances and did not contribute to the DPDS1 breaking away from the dock.

ii. Force Majeure Defense

Paragon also argues that Hurricane Harvey represented an Act of God that negates any liability that Paragon may otherwise bear.

General maritime law provides for a force majeure defense to liability. A party asserting such a defense must satisfy two elements: (1) the weather was heavy; and (2) the shipmaster “took reasonable precautions under the circumstances as known or reasonably to be anticipated.” *Petition of U.S.*, 425 F.2d at 995. The standard of reasonableness mirrors the analysis for negligence—i.e., “that of prudent men familiar with the ways and vagaries of the sea”. *Id.* The party asserting the defense bears the burden of proof. *In re Marine Leasing Servs.*, 471 F.2d 255, 257 (5th Cir. 1973).

In the current matter, no party disputes that Hurricane Harvey brought heavy weather to Port Aransas. The Fifth Circuit and its district courts have repeatedly found that storms like Hurricane Harvey qualify as Acts of God. *See, e.g., Boudoin*, 281 F.2d at 88 (concerning Category 3 Hurricane Audrey, which made landfall with “[w]inds of over 100 mph, driving rain and a storm tide of over 10 feet above mean sea level”); *Petition of U.S.*, 425 F.2d at 993–94, 996 (describing Category 3 Hurricane Betsy’s 120-150 mph winds as “vengefully furious” and “of unprecedented force”); *Pioneer Nat. Res. USA, Inc. v. Diamond Offshore Co.*, 638F. Supp. 2d 665, 690 (E.D. La. 2009) (describing Category 3 Hurricane Ivan as “a classic ‘Act of God’”); *Valley Line Co. v. Musgrove Towing Serv., Inc.*, 654 F. Supp. 1009, 1012 (S.D. Tex. 1987) (involving Category 3 Hurricane Alicia). And courts have concluded that Hurricane Harvey itself represented an Act of God. *See Landgraf v. Nat'l Res. Conservation Serv.*, No. 6:18-CV-0061, 2019 WL 1540643, at *2 (S.D. Tex. Apr. 9, 2019); *see also In re Downstream Addicks*, 147 Fed. Cl. 566 (2020).

Paragon fails, however, to establish that it “took reasonable precautions under the circumstances as known or reasonably to be anticipated” in the days before the hurricane made

landfall. On the contrary, the Court has found that Paragon's delayed decision and inadequate mooring system represented unreasonably deficient actions by Paragon. As a result, Paragon cannot rely on the force majeure defense.

The Fifth Circuit's opinion in *Boudoin* proves instructive. In that case, a tug captain secured his barge to a dock situated in the direct path of Hurricane Audrey, which made landfall less than two days later. During the hurricane's passage, the ship broke free of its moorings, resulting in damage to a nearby dock. The Fifth Circuit acknowledged that the storm was "surely" an Act of God, but concluded that the shipmaster could not rely on the force-majeure defense because he failed to evacuate the vessel—i.e., he did not take the reasonable precaution under the known circumstances to move the vessel upstream. *Boudoin*, 281 F.2d at 88; see also *Crescent Towing & Salvage Co. v. M/V CHIOS BEAUTY*, No. CIV. A. 05-4207, 2008 WL 3850481 (E.D. La. Aug. 14, 2008) (rejecting the defense because the shipmaster's negligence in response to the threat of Hurricane Katrina was a contributing cause to the resulting damages: "The defendants either chose to ignore . . . information or misinterpreted it. In either case defendants did so at their peril."). In the same manner, Paragon's delay in deciding to tow the DPDS1 out to sea ultimately caused the drillship to remain at the dock. And Paragon's inadequate mooring system rendered the DPDS1 vulnerable to the force of Hurricane Harvey, leading to its foreseeable breaking free of its moorings.

iii. Assumption of Risk

With respect to the damage to Signet's tug boats, Paragon argues that Signet willingly undertook to place those tugs at DPDS1's side to help keep the vessel from becoming unmoored during Hurricane Harvey. In doing so, Signet understood that the storm represented a grave threat of causing the drillship to break free. As any damage to Signet's tug boats stemmed from the very danger that Signet agreed to guard against—i.e., the breakaway of the DPDS1—Signet cannot seek recovery from Paragon as to that damage.

Maritime law recognizes that contracted parties cannot recover for harm suffered from “dangers which the contractor was hired to correct”. *Duplantis v. Zigler Shipyards, Inc.*, 692 F.2d 372, 374–75 (5th Cir. 1982). The defense typically arises in the context of shipyard contractors performing services for shipowners. In those situations, courts have denied recovery to contracted individuals who suffered injury when addressing the very problem the contractor was hired to remedy. *See, e.g., Hess v. Upper Mississippi Towing Corp.*, 559 F.2d 1030, 1033 (5th Cir. 1977) (“[T]he duty to provide a safe place to work does not extend to protect employees of an independent contractor from dangers the contractor was hired to correct.”). In *Hess*, the contractor agreed to remove residual gasoline and vapors from a vessel. An explosion during the removal process injured one of the contractor’s employees. Because the shipmaster had not controlled the removal process, the shipmaster owed no duty to protect the contractor’s employee engaged in the dangerous process that the work entailed. *Id.* at 1036; *see also Casaceli v. Martech Int’l, Inc.*, 774 F.2d 1322, 1331 (5th Cir. 1985) (concluding that a shipmaster owed no duty to a diver hired to repair a fouled propellor in muddy waters with significant debris, when the diver died after his air hose snagged on the debris); *Scindia Steam Nav. Co. v. De Los Santos*, 451 U.S. 156, 172 (1981) (articulating the principles that “the shipowner has no general duty by way of supervision or inspection to exercise reasonable care to discover dangerous conditions” on the vessel, and that the shipowner is entitled to rely on an independent contractor to perform its work with reasonable care).

Paragon concedes that these cases concern a distinct context, but urges their “logical application” to the present matter. The Court declines to do so. In *Hess*, *Casaceli*, and similar cases, the contractors’ employees suffered harm when working directly with the dangerous component that the work entailed. The employees had some level of control over their work so as to mitigate the known danger. For example, the diver in *Casaceli* could take precautions against his air hose becoming entangled with the known dangers of diving, such as debris. The employee in *Hess* controlled the gas-removal process to help avoid explosions caused by the removal process

itself. The worker in *Scindia* could avoid remaining underneath a loaded pallet when moving wheat bags. In these scenarios, the employees undertook dangerous work and possessed means to reduce or avoid the inherent danger. When the employees' mitigation efforts proved insufficient and harm ensued, the employees could not recover from the shipmaster. In contrast, in the present case, Signet agreed to help keep the DPDS1 moored to the dock, but had no control over whether the mooring system would suffice. Paragon contracted Signet to help strengthen the overall system keeping the DPDS1 in place, but the presence of Signet's tug boats neither weakened the mooring system nor contributed to its failure. As a result, the line of cases represented by *Scindia*, *Casaceli*, and *Hess* does not apply to the present context.

b. Resulting Allocation of Liability

The Court concludes that Paragon's negligence caused the DPDS1 to break away from the dock, resulting in foreseeable damages to the Gulf Copper dock, the Signet tug boats, and the Noble semisubmersible oil rigs. As a result, the court allocates full responsibility on Paragon for those damages. In addition, to the extent that the DPDS1 suffered damage from the initial breakaway, Paragon is solely responsible for those damages.

3. The Allision with the Research Pier

On August 28, the DPDS1 refloated, moved across the ship channel, and allied with the University of Texas research pier. As to this casualty, the Court concludes that both Signet and Paragon acted unreasonably, and that each party's respective negligence contributed to the allision.

A shipmaster must "use reasonable skill and care to prevent mischief to other vessels, and the liability is the same whether his vessel be in motion or stationary, floating or aground . . ." *The Louisiana*, 70 U.S. at 169; see also *Boudoin*, 281 F.2d at 85 ("[A shipmaster] has . . . a special duty to take all reasonable steps consistent with safety to this ship and her crew, to avoid or minimize the chance of harm to others."). In the present case, Paragon had a duty to take reasonable precautions to ensure that the DPDS1 did not move from its grounded position, or that

if it did, that it would not allide or collide with nearby vessels and property. In large measure, Paragon contracted with Signet to satisfy this duty. Paragon possessed no vessels of its own that could aid the DPDS1, and Signet's tug boats remained available to assist. As for Signet, “[a]lthough a tug is neither a bailee nor an insurer of the tow it is obligated to provide reasonable care and skill ‘as prudent navigators employ for the performance of similar services.’” *King Fisher Marine Serv., Inc. v. NP Sunbonnet*, 724 F.2d 1181, 1184 (5th Cir. 1984) (quoting *Stevens v. The White City*, 285 U.S. 195, 202 (1932)).

As a starting point, the Court concludes that Signet agreed to not only maintain a tug boat in the general vicinity of the DPDS1 to monitor it, but to also take measures to control the drillship should it re-float. Signet disputes this issue, claiming that it agreed to solely monitor the DPDS1, and that it did so from a dock situated about a mile away, from which the CONSTELLATION's crew had a line-of-sight to the DPDS1 during the day, and radar for nighttime monitoring. According to Signet, the CONSTELLATION could mobilize and reach the DPDS1 within about 20 minutes. The trial record, however, reveals that Signet's duty went beyond merely monitoring the drillship. Although Snyder testified that Signet only agreed to “keep an eye on” the DPDS1 and “monitor where she was going”, Koenig recalled that Signet would “keep one of their tugs at our ship watching over [the vessel]”, so as to “to prevent [the DPDS1] from drifting.”²⁰⁶ The CONSTELLATION's log book confirms that Captain Tringali understood his duty to be to “Hold DPDS1”, consistent with Koenig's testimony. The Court accepts Koenig's testimony as evidencing the agreement's scope.

In any event, the CONSTELLATION neither reasonably monitored the DPDS1 nor took any measures to prevent it from alliding with other vessels and property. During the evening of Monday, August 28, the DPDS1 refloated and moved approximately one mile across the ship channel over a period of four hours. While the CONSTELLATION's Captain testified that he monitored the radar regularly, he failed to notice the DPDS1's movement. He became aware that

²⁰⁶ Koenig Day 1 Tr., 252:5–13 (Doc. 448).

the DPDS1 had refloated only when the Coast Guard notified Signet. By then, it was too late. Once the Captain received notification, he immediately attempted to intercept the DPDS1, but the tug boat arrived after the drillship allided with the University of Texas research pier. Once at the scene, the CONSTELLATION successfully pinned the DPDS1 to the shore to prevent it from moving again.

These facts demonstrate that Signet failed to properly monitor the DPDS1 and did not take reasonable actions to prevent the allision with the research pier. Had the CONSTELLATION remained next to the DPDS1 or effectively monitored the radar, the tug boat would have undoubtedly reached the drillship before it allided with the research pier, and the CONSTELLATION could have taken steps to prevent the allision. As a starting point, the weather forecasts rendered foreseeable that the DPDS1 would refloat. In particular, after Hurricane Harvey traveled inland, WeatherOps and the National Hurricane Center issued reports predicting that the hurricane would return to the Texas coast, bringing turbulent weather, heavy rainfall, and rising waters in the Port Aransas area. These forecasts placed Signet and Paragon on notice that the DPDS1 would likely refloat once the water level rose. In light of such information, Signet, as a prudent tug boat owner, should have ensured accurate and constant monitoring of the DPDS1, from a position that would enable the tug boat to prevent the drillship from alliding with other vessels. As it turned out, the CONSTELLATION's inadequate monitoring of the DPDS1 provided the tug with no opportunity to even attempt to alter the drillship's course before the allision.

Signet responds that loose wires on the DPDS1 rendered it unsafe for the tug boat to get close to the drillship when it lay grounded, and that, as a result, it would have been impossible for the CONSTELLATION to prevent the DPDS1 from refloating and alliding with other property. The trial record, however, negates this argument. Swiftly after the allision, the CONSTELLATION successfully located a safe location on the DPDS1 that enabled the tug boat to pin and maintain the drillship immobile. As the DPDS1's movement across the ship channel proved relatively slow—i.e., covering about a mile over a four-hour period—had the CONSTELLATION monitored

the DPDS1 adequately, the tug boat would have had ample opportunity to locate a safe area on the drillship that the tug boat could utilize to alter the drillship's trajectory to avoid any allision.

At the same time, Paragon also bears responsibility. The company reviewed the weather forecasts leading up to the allision indicating that conditions would render it likely for the DPDS1 to refloat. And the parties agree that at all times, Paragon maintained access to the Rigstat GPS, which reported the DPDS1's exact location and movement and sounded an alarm if the DPDS1 moved. Schenkel and another Paragon employee first became aware that the DPDS1 had experienced initial movements on the morning of August 28. Despite this knowledge, at no time during that day did Paragon notify Signet, the Coast Guard, the local Pilot's Association, or the Port of Corpus Christi that the Rigstat device was suggesting movement by the DPDS1. On the contrary, Paragon failed to even inform Signet that the DPDS1 possessed the GPS device.

Had Paragon notified Signet of the DPDS1's movement, Signet could have mobilized the CONSTELLATION to either prevent the DPDS1 from moving further, or to guide the DPDS1 to a safe location. As shipmaster, Paragon maintained a duty to take reasonable steps to prevent its drillship from harming other's property. Although it contracted with Signet, doing so did not absolve Paragon of all responsibility, especially when Paragon remained in a position to assist Signet by providing important information that could have aided the CONSTELLATION. *See King Fisher Marine Serv., Inc.*, 724 F.2d at 1184 (explaining that "a tug is neither a bailee nor an insurer of the tow"); *Zurich Ins. Co. v. Crosby Tugs, L.L.C.*, 46 Fed. App'x. 732, *1 (5th Cir. 2002) (unpublished) ("A tug is neither a bailee nor an insurer of its tow . . ."). Paragon inexplicably chose to not convey that data to Signet. In failing to do so, Paragon acted unreasonably as shipmaster.

Both Signet and Paragon, had they fulfilled their respective duties properly, could have prevented the DPDS1's allision with the University of Texas research pier. At the moment that the DPDS1 lay grounded in the ship channel, the critical need was to prevent it from moving, and, if that could not be prevented, to keep it from alliding with others' property. Signet and Paragon

each possessed a duty to take reasonable actions to prevent such an allision, and each had the means to enable the CONSTELLATION to intercept the DPDS1 in a timely manner. Neither fulfilled its duty. The Court concludes that each party was equally responsible for the allision with the research pier. As a result, the Court allocates 50% responsibility on each party for the damage to the University of Texas's property.

B. Governing Contracts

Having determined the allocation of liability as between Paragon and Signet for each of the two distinct occurrences between August 25 and 28, the Court turns to whether the parties entered into a written contract for the services that Signet provided. Paragon claims the MCA governs, while Signet argues that its Tariff controls. Each contract contains differing insurance obligations and indemnity provisions that could impact the parties' ultimate responsibility for the damages that occurred after the DPDS1 broke away from the Gulf Copper dock.

General rules of contract law apply to maritime contracts. *Marine Overseas Servs., Inc. v. Crossocean Shipping Co.*, 791 F.2d 1227, 1234 (5th Cir. 1986). Whether a contract is a maritime contract depends on the "nature and character of the contract" and "whether it [references] maritime service or maritime transactions."²⁰⁷ *Norfolk Southern Railway Co. v. Kirby*, 542 U.S. 14, 24 (2004) (citations omitted). Courts apply federal common law to resolve maritime disputes, and state contract law may be used to supplement federal law where it is not inconsistent with admiralty principles. *Albany Ins. Co. v. Anh Thi Kieu*, 927 F.2d 882, 866 (5th Cir. 2015); see also *E. River S.S. Corp. v. Transamerica Delaval, Inc.*, 476 U.S. 858, 864–65 (1986) ("Drawn from state and federal sources, the general maritime law is an amalgam of traditional common-law rules, modifications of those rules, and newly created rules.").

The Restatement (Second) of Contracts, which is recognized as instructive by both federal and Texas law, defines a contract as a "promise or set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes a duty." Restatement

²⁰⁷ The parties do not dispute that the MCA and the Tariff each represent a maritime contract.

(Second) of Contracts § 1 (1981). A contract is formed when at least two parties reach a “meeting of the minds” on all essential terms of the contract. *Fischer v. CTMI, L.L.C.*, 479 S.W.3d 231, 237 (Tex. 2016). “The determination of a meeting of the minds, and thus offer and acceptance, is based on the objective standard of what the parties said and did and not on their subjective state of mind.” *In re Capco Energy, Inc.*, 669 F.3d 274, 280 (5th Cir. 2012) (citations omitted); see also *Haws & Garrett Gen. Contractors, Inc. v. Gorbett Bros. Welding Co.*, 480 S.W.2d 607, 609 (Tex. 1972). Essential terms are those that “parties would reasonably regard as ‘vitally important ingredient[s]’ of their bargain.” *Fischer*, 479 S.W. 3d at 237 (quoting *Neeley v. Bankers Tr. Co.*, 757 F.2d 621, 628 (5th Cir. 1985)). In general, the scope and nature of the services to be performed would be an essential term.

“Whether a signature is required to bind the parties is a question of the parties’ intent.” *Huckaba v. Ref-Chem, L.P.*, 892 F.3d 686, 689 (5th Cir. 2018). To ascertain the parties’ intent at the time of contracting, courts must “consider the entire writing in an effort to harmonize and give effect to all the provisions of the contract so that none will be rendered meaningless.” *J.M. Davidson, Inc. v. Webster*, 128 S.W.3d 223, 229 (Tex. 2003). Signatures are not required where the parties have agreed to the essential terms of a contract and “there is no evidence of an intent to require both signatures as a condition precedent to it becoming effective as a contract”. *Perez v. Lemarroy*, 592 F. Supp. 2d 924, 930 (S.D. Tex. 2008).

1. The Master Charter Agreement

Paragon contends that the MCA governs Signet’s provision of tug boat services related to the DPDS1 during Hurricane Harvey. Signet responds that the two companies never reached a meeting of the minds as to this contract. Based on the trial record and the applicable law, the Court concludes that Paragon and Signet did not agree that the latter would provide tug boat services under the MCA to help keep the DPDS1 at the dock during Hurricane Harvey.

Both parties accept that in 2015, they signed the MCA. That document, however, did not represent a binding contract for any specific performance of services. Rather, the MCA provided

a framework through which the two companies could contract for specific services. *See Great Circle Lines, Ltd. v. Matheson & Co.*, 681 F.2d 121, 125 (2d Cir. 1982) (describing the first stage of a charter agreement as negotiating the “bare-bones” of the contract). By its own terms, the MCA did “not obligate [Signet] to charter their vessels to [Paragon], nor [] obligate [Paragon] to hire any vessel or vessels owned by [Signet]”.²⁰⁸ As a result, at trial, Paragon had to prove that Signet specifically agreed that the MCA would govern for the charter of tug boat services actually provided.

Beginning on Wednesday, August 23, Paragon’s and Signet’s respective corporate counsel began discussions regarding Signet’s anticipated tow out of the DPDS1. Consistent with the framework that the MCA provided, they exchanged e-mails focused on Part II of the MCA. In particular, Signet requested revisions to the standard insurance and indemnity provisions. This focus stemmed from the uncommon risks that Hurricane Harvey presented for the anticipated tow out services. As a result, the insurance and indemnity provisions represented an essential term that the parties negotiated. Late that evening, their communications reflected an agreement on all material terms, and Paragon requested that Signet’s counsel prepare the BIMCO. Importantly, at that moment, both counsel understood that Signet’s services would entail towing the DPDS1 out to sea. That understanding continued the following morning around 5:00 a.m., when Signet’s counsel agreed to “generate the BIMCO agreement for today’s tow”.²⁰⁹

About three hours later, Signet’s Captain Gibson informed Snyder that the Coast Guard was closing the Port of Corpus Christi and that the DPDS1 would not leave the port. At that moment, the parties’ agreement regarding the MCA became moot, as any agreement had envisioned towing the DPDS1 out to sea. The project shifted to keeping the DPDS1 at the dock, which represented a material change in the nature of the services that Paragon requested from Signet. The two services—i.e., towing the drillship out to sea and maintaining the DPDS1 at her

²⁰⁸ *Master Charter Agreement*, P.Ex.4 (Doc. 409-2, 1).

²⁰⁹ Reid Email, P.Ex.17-A-Part 1 (Doc. 410-31, 273).

dock—entailed different risks, duties, and obligations. And neither Paragon nor Signet considered the two options interchangeable.

Given that the services that Paragon sought to purchase from Signet materially changed on the morning of August 24, Paragon had to demonstrate that Signet agreed to provide the new services under the MCA. And as to this point, the evidence is unambiguous: Signet expressly refused to do so. On the morning of Thursday, August 24, Snyder (Signet) spoke with Schenkel (Paragon). Schenkel expressed Paragon’s preference “to use the old contract”—i.e., the MCA. Snyder responded directly: “I said, absolutely not, sir, it’s very dangerous to use that.”²¹⁰ While Schenkel does not remember this conversation, he does not contest that it occurred, and the Court finds that it did. As a result, Paragon cannot demonstrate that Signet agreed that the MCA would govern the provision of tug boats to keep the DPDS1 at the dock during Hurricane Harvey.

Other factors further demonstrate that Signet did not agree to provide tug boat services under the MCA. First, the parties never completed the BIMCO on the morning of August 24, despite Signet’s counsel’s agreement to do so. While the MCA did not require a signed Charter Order, the fact that the parties expressly anticipated signing the document for the planned tow out operation, and then never followed through with the signatures, indicates that both parties understood that the MCA was no longer relevant to the new services that Signet would provide. Signet emphasizes that the absence of a signed BIMCO automatically meant that the MCA could not control. The MCA, however, did not require as much. On the contrary, the MCA expressly contemplated that “[u]pon reaching an agreement to charter a vessel from Signet”, the parties “may issue” a Charter Order, which included the BIMCO (Part I) and that contained the agreed terms.²¹¹ This language within the MCA unambiguously reflects that the parties could reach “an agreement” before they issued a Charter Order, and that the MCA did not require the issuance, much less the signing of, a Charter Order for the MCA to apply. Still, while the MCA did not

²¹⁰ Snyder Day 5 Tr., 203:1–10 (Doc. 452).

²¹¹ *Master Charter Agreement*, P.Ex.4 (Doc. 409-2).

require a signed Charter Order, the absence of a signed document, in the context of the parties' negotiations, demonstrates that Paragon understood that the MCA would not control for the services that Signet ultimately provided.

Second, the MCA's own language runs counter to Paragon's attempt to enforce it as an agreement. Paragon focuses on Paragraph 1.3 of the MCA, which indicated that the document "shall control and govern in all situations in which [Signet] charter[ed] to [Paragon] a vessel or vessels".²¹² Paragon also explains that under the MCA's language, the contract would "control and govern, absent a separate written charter specifically made applicable." This argument, however, fails to take into account the entire MCA. "A maritime contract. . . should be read as a whole and its words given their plain meaning unless the provision is ambiguous." *Weathersby v. Conoco Oil Co.*, 752 F.2d 953, 955 (5th Cir. 1984). Part II of the BIMCO clarified that the MCA applied to "offshore activities" and "voyages."²¹³ In the present case, the anticipated towing of the DPDS1 out to sea involved a "voyage" to an "offshore" location—i.e., the Gulf of Mexico. In contrast, assigning tug boats to help keep the DPDS1 at its docked location involved no voyage, much less one offshore. The first project fell within the plain meaning of the MCA's terms, but the latter project did not.

And third, the parties' conduct proves illustrative. In spring and early summer 2017, Signet provided tug boat services to Paragon for the DPDS1 on several occasions. In particular, Signet's tug boats helped keep the DPDS1 from breaking away from its dock when passing vessels caused water surges. For these services, Signet's invoices to Paragon applied pricing consistent with the Tariff. Paragon paid those invoices without objection. And no party presented evidence that for the provision of these services, the parties discussed the MCA or sought the completion or signature of the BIMCO. In contrast, in August, when Paragon contemplated towing the DPDS1 out to sea, the parties initiated discussions specific to the MCA. In addition, another example

²¹² *Id.*

²¹³ *Id.* at 11.

arose in September, after Hurricane Harvey cleared the area. Signet provided tugs to hold the DPDS1 stationary in its grounded position on the ship channel shore, until it was towed to a shipyard for repairs. Later, Signet towed the drillship to Brownsville, Texas, to be scrapped. For the initial in-port services, the parties never discussed the MCA and Signet invoiced Paragon under Tariff rates. For the tow to Brownsville, the parties signed a BIMCO form under the MCA.²¹⁴ As with previous engagements, for in-harbor services, the parties applied the Tariff with no mention of the MCA. For the voyages, the reverse occurred.

For these reasons, the Court concludes that Paragon and Signet did not agree that the MCA would govern when Signet provided tug boat services to keep the DPDS1 at the dock during Hurricane Harvey.

2. The Tariff

The Court's conclusion that Signet and Paragon did not agree to operate under the MCA for the services that Signet actually provided does not necessarily require the determination that the Tariff governed. Signet and Paragon could have reached no agreement on any written contract. At trial, Signet bore the burden to demonstrate that the parties reached a meeting of the minds to operate under the Tariff's terms. And based on the record and the applicable law, the Court concludes that they did.

As an initial matter, the Court has found that on Thursday, August 24, Paragon's and Signet's principals discussed and agreed that Signet would provide tug boats to help keep the DPDS1 in place, under the terms of the Tariff. Snyder provided clear testimony on this issue; Schenkel did not dispute that the discussion occurred. In addition, about two hours before that conversation, Snyder e-mailed his Signet colleagues that Signet desired to provide the services under the Tariff: "We need to pass onto [Paragon's representatives] we'll operate under our tariff for this." While Paragon did not see that e-mail, the communication corroborates Snyder's

²¹⁴ Completed BIMCO Form, P.Ex.17-A-Part 2 (Doc. 410-32, 101).

recollection of his conversation with Schenkel about two hours later and lends credibility to his testimony regarding their discussion.

The oral nature of the agreement poses no difficulties to Signet. Maritime law recognizes the validity of oral contracts. *See Kossick v. United Fruit Co.*, 365 U.S. 731, 734 (1961); *John W. Stone Oil Distributer, L.L.C. v. Penn Maritime, Inc.*, 2018 WL 6018804, No. 17-4942 c/w 17-5700 (E.D. La. Nov. 16, 2018). Under federal maritime law, an oral agreement can incorporate the terms of a written document, such as the Tariff, by reference. *See, e.g., Complaint of Moran Philadelphia*, 175 F. Supp. 3d 508, 522 (E.D. Pa. 2016) (concluding that a written Schedule of Rates, Terms, and Conditions was incorporated into an oral towage contract). While the record does not reflect that Signet sent the Tariff to Paragon before August 2017, Signet published the document. Within the maritime industry, courts have recognized the enforceability of published tariffs. *See, e.g., One Beacon Ins. Co. v. Crowley Marine Servs., Inc.*, 648 F.3d 258, 268 (5th Cir. 2011) (finding that contract terms posted on a website were incorporated by reference because the terms were easily accessible to the party and unambiguously incorporated into the agreement); *John W. Stone Oil Distributor, L.L.C.*, 2018 WL 6018804, at *8 (enforcing a tug company's tariff even though the other party did not sign a copy of the document). Additionally, “[c]ertain long-standing customs of the shipping industry”, such as the use of tariffs, “are crucial factors to be considered when deciding whether there has been a meeting of the minds on a maritime contract.” *Great Circle Lines, Ltd.*, 681 F.2d at 125.

The course of dealing between Paragon and Signet further supports the enforceability of the Tariff for the services that Signet provided. A course of dealing is “a sequence of previous conduct between the parties to an agreement which is fairly to be regarded as establishing a common basis of understanding for interpreting their expressions and other conduct.” *One Beacon Ins. Co.*, 648 F.3d at 265 (quoting Restatement (Second) Contracts § 223 (1981)). Courts may infer that the parties “were aware of and consented to [] additional contractual terms” based on as few as three or four transactions. *One Beacon Ins. Co.*, 648 F.3d at 265 (concluding that

eight prior transactions between the parties established a course of dealing); *see also Royal Ins. Co. v. Sea-Land Serv., Inc.*, 50 F.3d 723, 727 (9th Cir. 1995) (relying on three invoices as evidence of a course of dealing).

In the present matter, between May and June of 2017, Signet provided tug boat services on at least five occasions to assist the DPDS1 at the Gulf Copper dock, and Signet invoiced Paragon for these services in accordance with the Tariff. Paragon paid for those services without objection. Although the invoices did not explicitly reference the Tariff, it is reasonable to infer that Paragon was aware that the charges were based on the Tariff's terms, as that practice is consistent with maritime industry customs. The Court finds that these previous transactions established a course of conduct between the parties. In August 2017, when Snyder asked Schenkel to accept the Tariff, Snyder could rely on those previous transactions to establish that Paragon understood and assented to the full terms for the contract, even if the two men did not discuss all those terms in their conversation.

Paragon advances various arguments against the formation and enforceability of the Tariff, but none of those arguments prevail.

First, Paragon contends that under Paragraphh 5 of the Tariff, the agreement did “not cover Services to vessels aground or in distress, including assistance to a deadship . . . , or when Services are performed during heightened Coast Guard port conditions.”²¹⁵ Under federal maritime law and Texas law, however, a party may unilaterally waive a provision of a contract that is solely intended for that party’s benefit. *See, e.g., Shute v. Thompson*, 82 U.S. 151 (1872); *Johnson v. Structured Asset Servs., LLC*, 148 S.W.3d 711, 722 (Tex. App.—Dallas 2004, no pet.). “Waiver is an intentional relinquishment of a known right or intentional conduct inconsistent with claiming that right.” *Sun Expl. & Prod. Co. v. Benton*, 728 S.W.2d 35 (Tex. 1987); *see also Bott v. J.F. Shea Co.*, 388 F.3d 530 (5th Cir. 2004) (finding that the subcontractor’s conduct

²¹⁵ 2016 *Signet Ingleside Tariff*, S.Ex.1 (Doc. 414, 5). The Court previously concluded that the DPDS1 was not a deadship under the Limitation of Shipowners’ Liability Act. *Paragon Asset Co. Ltd. V. Gulf Copper & Manufacturing Corp., et al.*, 519 F. Supp. 3d 424, 429 (S.D. Tex. 2021).

implicitly waived a contractual requirement to name a party as an additional insured on its insurance policy). A party can implicitly waive a contract provision through its conduct, so that conduct inconsistent with one contract term will not necessarily negate that the parties mutually assented to the agreement's essential terms. *See Stauffer Chem. Co. v. Brunson*, 380 F.2d 174 (5th Cir. 1967).

In the current matter, Paragraph 5 of the Tariff exists for Signet's sole benefit. Signet provided services to vessel owners within the harbor based on the published and understood terms of the Tariff. A vessel owner would request services, and Signet would assign tug boats to that project. The ability to conduct business in this manner, without having to negotiate a contract for each occasion, facilitated fluid business relationships. But Paragraph 5 of the Tariff protected Signet by ensuring that the contract did not automatically apply when the requested services entailed riskier operations, such as tug boat services for a deadship or during heightened Coast Guard port conditions. On August 24, Signet chose to waive this provision when it expressly offered to perform the services under the Tariff.

Paragon also argues that the Tariff cannot govern because it represents a contract of duress, or alternatively, a contract of adhesion. In the Fifth Circuit, “[t]he party seeking to establish economic duress must show that a wrongful threat was made which was of such character as to destroy the free agency of the party to whom the threat was directed.” *Palmer Barge Line, Inc. v. S. Petroleum Trading Co.*, 776 F.2d 502, 505 (5th Cir. 1985). For example, “a showing of imminent financial distress coupled with the absence of any reasonable alternative to the terms presented by the wrongdoer may be sufficient to establish economic duress.” *Id.*

Paragon relies on various decisions in support of its economic-duress defense, including: *The Elfrida*, 172 U.S. 186, 192 (1898); *Magnolia Petroleum Co. v. Nat'l Transps. Co.*, 286 F. 40, 42 (5th Cir. 1923); and *Blue Water Marine Servs. v. M/V Natalita III*, 2009 U.S. App. LEXIS 29119 (11th Cir. Sept. 8, 2009). But those decisions do not support Paragon's position. In *The Elfrida*, the Supreme Court established that a salvage contract “will not be set aside unless

corruptly entered into, or made under fraudulent representations, a clear mistake or suppression of facts, in immediate danger to the ship, or under other circumstances amounting to compulsion, or when their enforcement would be contrary to equity and good conscience". 172 U.S. at 192. Paragon argues that as the DPDS1 was in "immediate danger" on August 24, Paragon should not be bound to the Tariff.

This argument fails, however, for at least two reasons. First, in *The Elfrida*, the Supreme Court recognized that in "most of the cases where the contract was held void, the facts showed that advantage was taken of an apparently helpless condition to impose upon the master an unconscionable bargain." *Id.* at 196; see also *Magnolia Petroleum Co.*, 286 F. at 42 ("The refusal of the master of the Greer to render assistance, and his threat to leave the Bolikow unless his exorbitant demand was acceded to, amounted to moral compulsion, and the contract, which he procured by the methods adopted, is not protected or made binding and valid by the rule laid down in *The Elfrida*"). In essence, the defense of economic duress protects against one party taking advantage of extreme conditions to force otherwise unacceptable terms on another party. Under such circumstances, courts will void the unconscionable terms. In the present matter, however, the Tariff does not constitute "an unconscionable bargain." In fact, Paragon and Signet had conducted business on numerous occasions under the Tariff. This course of conduct demonstrates that the Tariff contained terms that both sides had accepted for tug boat services within the harbor. Second, it is not apparent that Paragon viewed itself as in a "helpless condition" when it agreed to the Tariff. According to Paragon, on August 24, it believed that its mooring system would withstand Hurricane Harvey's anticipated wind speeds. Paragon contracted for Signet's services not because it believed that absent such services the DPDS1 would surely come unmoored, but to provide additional support for that mooring system.

Similarly, Paragon cannot demonstrate that the Tariff represents a contract of adhesion that the Court should find unenforceable. As a general matter, "adhesion contracts are not automatically void. Instead, the party seeking to avoid the contract generally must show that it is

unconscionable.” *Dillard v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 961 F.2d 1148, 1154 (5th Cir. 1992). Unconscionability may be procedural or substantive. To show that an agreement is procedurally unconscionable, a party must show more than an imbalance of power or time pressure. *Fleetwood Enter., Inc. v. Gaskamp*, 280 F.3d 1069, 1077 (5th Cir. 2002). As for substantive unconscionability, “[t]he test . . . is whether, ‘given the parties’ general commercial background and the commercial needs of the particular trade or case, the clause involved is so one-sided that it is unconscionable under the circumstances existing when the parties made the contract.’” *In re Palm Harbor Homes, Inc.*, 195 S.W. 3d 672, 678 (Tex. 2006) (quoting *In re FirstMerit Bank*, 52 S.W. 3d 749, 757 (Tex. 2001)); *see also Hafer v. Vanderbilt Mortg. & Fin., Inc.*, 793 F. Supp. 2d 987, 1004 (S.D. Tex. 2011) (finding that an arbitration agreement between a mortgage and finance corporation and the homeowner was not so one-sided to render the terms unconscionable). With respect to procedural unconscionability, in the present matter, no imbalance of power existed between Paragon and Signet, each of which represented a sophisticated commercial enterprise. And the mere fact that the approaching hurricane created an urgent need did not render an agreement to the Tariff unconscionable. As to substantive unconscionability, no evidence demonstrates that the Tariff’s provisions were significantly one-sided. On the contrary, on August 24, when Paragon’s in-house counsel received an e-mail indicating that the business representatives had agreed to apply the Tariff to the engagement, he merely replied, “Thanks for the update—much appreciated.”²¹⁶ As the lawyer for Paragon, bound to represent the company’s best interests, he expressed no concerns—either to Signet or internally at Paragon—about applying the Tariff. And his reaction is not surprising. Paragon and Signet previously had conducted business under the Tariff, which itself represented a standard agreement within the industry that was meant to facilitate fluid engagement between Signet and vessel owners. In fact, Paragon does not object to the Tariff’s substantive terms, but seeks to void the agreement because certain provisions within the Tariff concerning indemnity and insurance

²¹⁶ Oliver Email, S.Ex.125 (Doc. 421-22, 33).

favor Signet, based on the events that ultimately unfolded. But this fact does not render the contract's terms unconscionable.

Not only do Paragon's attacks on the formation and enforceability of the Tariff fail, but its conduct also demonstrates that it ratified the agreement. Under Texas law, "if a party acts in a manner that recognizes the validity of a contract with full knowledge of the material terms of the contract, the party has ratified the contract and may not later withdraw its ratification and seek to avoid the contract." *Malin Intern. Ship Repair & Drydock, Inc. v. Oceanografia*, 817 F.3d 241, 250 (5th Cir. 2016). A party can ratify an agreement by accepting the services or benefits of a contract and paying invoices pursuant to that agreement. *Id.*; see also *Sitco Enterprises, LLC v. Tervita Corp.*, 2018 WL 3032579 (S.D. Tex. 2018) (finding that performance of contract obligations, such as payment of invoices, ratifies the contract and subjects that party to liability); *Chopra & Assocs., PA v. U.S. Imaging, Inc.*, 2014 WL 7204868, at *3 (Tex. App.—Houston [14th Dist.] Dec. 18, 2014) ("A party cannot avoid an agreement by claiming there was no intent to ratify after that party has accepted the benefits of the agreement."). In the current case, Signet invoiced Paragon for the services of the ENTERPRISE, the ARCTURUS, and the CONSTELLATION, reflecting charges consistent with the Tariff rates. Paragon approved and paid those invoices in full.

The Court also concludes that the Tariff continued to control the services that Signet provided through the August 28 incident. The day after the DPDS1's breakaway on August 25, Signet verbally agreed to assign a tug boat to assist with the drillship, now grounded in the ship channel. On Sunday, August 27, Paragon's counsel requested that Signet provide the services under the MCA. Signet responded that the in-harbor ship assist services would "continue to be governed by our tariff".²¹⁷ Paragon does not appear to have contested the matter, and Signet eventually invoiced for the services based on Tariff rates. Paragon paid those invoices without objection.

²¹⁷ Reid Email, S.Ex.126 (Doc. 422, 3)

For these reasons, the Court concludes that the Tariff governs Signet's provision of tug boat services in connection with the DPDS1 during the August 25 and August 28 events.

C. American Club

American Club requests a take-nothing judgment in its favor because Paragon is not an insured or an additional insured under the Protection and Indemnity Insurance Contract with Signet. Paragon contends that it enjoys coverage under the P&I Insurance Contract because Signet agreed under the MCA to provide such coverage. In the alternative, Paragon argues that it qualifies for coverage under the Additional Assureds and Waiver of Subrogation Clause of the P&I Insurance Contract.²¹⁸

As previously indicated, the Tariff governs in this action. This conclusion proves fatal to Paragon's argument regarding American Club, as absent the MCA's application, Paragon presents no argument indicating that American Club would have any obligations as to Paragon. As a result, American Club bears no liability as to Paragon for any of the damages at issue in this lawsuit.²¹⁹

D. Damages

The Court turns now to the measure of damages and the impact of the Tariff's provisions regarding the parties' liability for those damages. This analysis turns largely on the following findings: (1) With respect to the initial breakaway of the DPDS1, Paragon bears full responsibility for the damages to the Gulf Copper dock, the Noble semisubmersible oil rigs, the Signet tug boats, and the DPDS1 itself; (2) As to the damages to the University of Texas research pier, Signet and Paragon each bear 50% responsibility; and (3) The Tariff governs as to Signet's provision of services from August 25 through 28.

²¹⁸ *Confidential Protection and Indemnity Insurance Contract*, AC.Ex.3 (Doc. 437, 9).

²¹⁹ American Club also contends that even if Paragon qualified as an insured under the P&I Insurance Contract, Paragon failed to provide prompt notice of the casualty, as the policy required. The Court does not reach this alternative argument, given its conclusion that the Tariff controls in this matter.

Signet and Paragon have entered into settlement agreements with Noble, the University of Texas, and Gulf Copper. The parties have not requested that the Court enter findings at this time as to the amount of damages to those parties' property.

1. The DPDS1

The Court has concluded that Paragon bears full responsibility for the DPDS1's initial breakaway, and that Paragon and Signet each bear 50% responsibility for the drillship's allision with the research pier. Based on these findings, Paragon cannot recover for any damages to the drillship that stemmed solely from the initial breakaway. Signet, however, is liable for 50% of the damages to the DPDS1 occasioned by the allision with the research pier.

Paragon bore the burden to establish its recoverable damages. *See Gaines Towing & Transp., Inc. v. Atlantia Tanker Corp.*, 191 F.3d 633, 635 (5th Cir. 1999) ("[A] defendant cannot be held liable for damages that he has not been shown to have caused"). But Paragon presented no evidence segregating the damages to the drillship, which could have suffered damage at any number of points. For example, in the breakaway from the dock, the drillship forced the Signet tug boats into the Noble semisubmersible oil rigs. The ensuing contact between the vessels likely damaged the DPDS1. Also, the drillship grounded in the ship channel with a noticeable list, indicating that it may have taken on water through an opening caused by the breakaway or the grounding itself. Signet would have no liability as to any damages to the DPDS1 through the initial grounding in the ship channel. As to the allision with the research pier, although it is likely that the allision damaged the drillship, Paragon presented no evidence identifying the damages attributable solely to this event. As a result, Paragon cannot recover any damages from Signet as to such damages.

In addition, Paragon requests damages that do not stem from the breakaway or the allision with the research pier. For example, Paragon includes as damages the expenses related to the towing of the DPDS1 from Corpus Christi to Brownsville to be scrapped. But Paragon cannot recover such damages, as the purposes of compensatory damages in tort cases "is to place the

injured person as nearly as possibly in the condition he would have occupied if the wrong had not occurred.” *Freeport Sulphur Co. v. S/S Hermosa*, 526 F.2d 300, 304 (5th Cir. 1976). Here, the record demonstrates that before Hurricane Harvey, Paragon had already decided to scrap the DPDS1, and to do so by October 2017. This evidence reveals that the scrapping of the DPDS1 did not arise from the events surrounding Hurricane Harvey, but was a decision that Paragon reached before the casualty. And no evidence indicates that the casualty increased the cost of scrapping the DPDS1, or decreased its value as a vessel to be scrapped.

2. The ENTERPRISE

As to the ENTERPRISE, Signet seeks \$6,969,373.51 to \$7,469,373.51 in damages, comprised of the following:

Category	Amount
Wreck removal services	\$1,735,607.78
Surveyor expenses	\$41,412.17
Fair market replacement costs	\$5,150,000.00 – \$5,650,000.00
Loss of charter hire damages	\$42,353.56

The parties agree that after the casualty, the ENTERPRISE was a constructive total loss—i.e., the damage to the vessel was repairable, “but the cost of repairs exceed[ed] the fair market value of the vessel immediately before the casualty.” *Gaines Towing & Transp.*, 191 F.3d at 635. “If a loss is deemed a constructive total loss, damages are the ship’s value at the time of collision, less salvage.” *Zanzibar Shipping, S. A. v. R.R. Locomotive Engine No. 2199*, 533 F. Supp. 392, 394 (S.D. Tex. 1982); *see also Factory Mut. Ins. Co. v. Alon USA L.P.*, 705 F.3d 518, 521 (5th Cir. 2013) (“A plaintiff whose property has been destroyed by the tortious acts of another is generally entitled to recover the market value of the property at the time of its loss.” (cleaned up)).

The owner of a vessel considered a constructive total loss may also recover consequential damages, including for wreck removal services and surveyor expenses. *Sunglory Mar. Ltd. v. Phi, Inc.*, No. CV 15-896, 2016 WL 852476, at *2 (E.D. La. Mar. 4, 2016); *see also Truong v. St. Paul*

Fire & Marine Ins. Co., 345 F. App'x 948, 953 (5th Cir. 2009) (unpublished) (stating that recovery costs for a vessel that is a total constructive loss should include expenses “necessary to deliver the ship from its peril to a port of safety”). The owner recovers surveyor expenses “only for surveys which estimated the damages or repair costs,” but not for surveys related to designing repair work. *Zanzibar Shipping, S.A.*, 533 F. Supp. at 398.

“The established rule is that in a case of total loss, the owner is not compensated for the loss of use of the boat.” *E.I. DuPont de Nemours & Co. v. Robin Hood Shifting & Fleeting Serv., Inc.*, 899 F.2d 377, 382 (5th Cir. 1990) (citing *King Fisher Marine Serv., Inc.*, 724 F.2d at 1185).

Applying these principles to the requested damages, Signet may recover \$1,735,607.78 for wreck removal services and \$41,412.17 for surveyor expenses. But Signet may not recover its alleged damages for loss of charter.

As to fair market value, the parties agree that the recoverable amount is the fair market value minus \$500,000 from the sale of the ENTERPRISE in December 2018. Signet claims that the fair market value of the ENTERPRISE is between \$5,650,000 and \$6,150,000, based primarily on the testimony of Barry Snyder, who stated that based on his experience and knowledge of the industry, the ENTERPRISE on August 25, 2017, had a fair market value of at least \$6,150,000.²²⁰ In support of his belief, Snyder pointed to the sale of the INTREPID, which was the ENTERPRISE’s sister ship. That vessel sold in 2019 for \$6,150,000, and Snyder testified that only “minimal” changes in the relevant market occurred between August 2017 and the date of the INTREPID’s sale.

Paragon argues that the correct value is \$4,100,000. In reaching this figure, Paragon relies on two reports. First, in October 2017, American Club retained Dufour, Laskay and Strouse to determine the value of the ENTERPRISE. Using the cost approach, the Laskay Report calculated \$4,100,000 as the theoretical fair market value of the ENTERPRISE in working

²²⁰ Snyder Day 5 Tr., 221:19 (Doc. 452).

condition at the time of the casualty.²²¹ Second, in connection with the litigation, Paragon retained Peter Roberts as a valuation expert. He opined that the Laskay Report accurately valued the ENTERPRISE at \$4,100,000.²²²

The Court accepts the valuations by Laskay and Roberts. Snyder disagreed with the Laskay Report, but did not provide any compelling arguments that called into question that report's conclusions. In addition, in reaching his own opinion, Snyder relied on one sale (i.e., the INTREPID in 2019) and his general knowledge and experience. The Court finds the reports by Laskay and Roberts more amply supported and, as a result, more reliable.

Reducing the fair market value by the \$500,000 from the sale of the ENTERPRISE, Signet is entitled to recover \$3,600,000 for the constructive total loss of that vessel.

3. The ARCTURUS

As to the ARCTURUS, Signet seeks \$2,364,059.87 in damages, comprised of the following:

Category	Amount
Salvage costs	\$ 37,055.74
Surveyor expenses	\$ 54,225.74
Repair costs	\$ 1,517,311.08
Loss of charter hire damages	\$ 755,467.31

When a damaged vessel in a maritime accident is not a total loss, the owner is entitled to recover “the reasonable cost of repairs necessary to restore it to its pre-casualty condition and actual profits lost during the detention necessary to make repairs.” *Gaines Towing and Transp., Inc.*, 191 F.3d at 636–37 (citing *The Tug June S v. Bordagain Shipping Co.*, 418 F.2d 306, 307 (5th Cir. 1969)). The claimant must establish the amount of repair costs “with reasonable certainty that the damages claimed were actually or may be reasonably inferred to have been incurred as a result of the collision.” *Marine Transp. Lines, Inc. v. M/V Tako Invader*, 37 F.3d

²²¹ Dufour, Laskay & Strouse, Inc., Signet ENTERPRISE Appraisal Report, S.Ex.146 (Doc. 423, 2).

²²² Supplementary Report on Damages claims to Signet Maritime Tugboats Arcturus & Enterprise, P.Ex.17-I (Doc. 424-18, 10).

1138, 1140 (5th Cir. 1994) (citations omitted); *see also United States v. John Stapp, Inc.*, 448 F. Supp. 2d 819, 824–25 (S.D. Tex. 2006) (explaining that the party seeking repair costs must prove the reasonableness of the amount). As to loss of charter hire damages, the vessel owner must establish that the vessel was capable of being engaged in profitable commerce during the repair period. *See Delta S.S. Lines Inc. v. Avondale Shipyards, Inc.*, 747 F.2d 995, 1001 (5th Cir. 1984) (explaining that the correct figure for lost profit is the revenue less expenses).

Signet claims that the cost of repairing the ARCTURUS totaled \$1,517,311.08. Paragon challenges this amount, arguing that \$454,221.78 is unrecoverable because it stemmed from unreasonably steps that Signet took during the repairs, such as failing to conduct a detailed inspection of the vessel when initially dry docked.²²³ Based on the trial record, however, the Court concludes that Signet has demonstrated it incurred repair costs of \$1,517,311.08 as a result of the DPDS1 breaking away, and that those costs were reasonable and necessary. For example, the Chief Engineer for the ARCTURUS, Loren Smith, testified that when Signet initially dry docked the vessel, various representatives from Signet, the Coast Guard, Rolls-Royce (the maker of the Z-drive), and the American Bureau of Shipping (ABS) visually inspected the vessel, including opening up the top of the Z-drive. Based on their collective discussion and inspection, they collectively “decided not to open up the hub because we had no indication of any damage internally.”²²⁴ Doing so may have uncovered the internal damage to the Z-Drive at that moment, but would have required substantial time and costs. Although a vessel owner can inspect all possibly damaged areas after a casualty, Smith explained that “it’s just not good engineering practice just to start tearing apart stuff.”²²⁵ Here, Signet acted reasonably when not ordering a full inspection of the Z-drive, based on the available data. Later, after the first sea test, Signet realized that issues persisted, and that an internal analysis would be required. At that time, the repair dock was no longer available for an extended period, and as a result, Signet dry docked in

²²³ Paragon’s and Signet’s Revised Stipulations of Fact as to Their Contentions Regarding Damages (Doc. 392, 6).

²²⁴ Smith Dep., 117:18–23, S.Ex.334 (Doc. 431-5).

²²⁵ *Id.* at 185:9–11.

that location solely for the short period necessary to make temporary repairs so that the ARCTURUS could then proceed to an available repair dock in Pascagoula. This series of events explains the three separate dry docks for the ARCTURUS, and the sequence of repairs was not unreasonably undertaken. Other evidence demonstrated that the damages to the tug boat arose from the DPDS1 breaking away, and supported the amount paid for the repairs. As a result, Signet is entitled to recover \$1,517,311.08 in repair costs. And related to the repairs, Signet also has demonstrated entitlement to the \$37,055.74 expended in salvage costs and \$54,225.74 incurred for surveyor expenses.

Finally, Signet requests \$755,467.31 for loss of charter hire, relying principally on an analysis by Stephen Key, Signet's Vice President for Corporate Accounting and Treasury. As to this category of damages, Paragon argues that Signet incorrectly bases the requested amount on "gross, unreduced revenue and utilization calculations" and fails to account for various market factors, such as whether "Signet's Ingleside operations returned to normal operations prior to the completion of repairs to the tug."²²⁶

Based on the trial record, the Court concludes that Paragon's arguments have significant force, and that Signet has not proven its requested damages by a preponderance of the evidence. First, to the extent that Key calculated gross revenue, that amount would not be recoverable. The law affords vessel owners lost profits, not lost revenue. And the \$755,467.31 that Signet requests represents "implied lost revenue", not profits. In his testimony, Key confirmed that when calculating this amount, he did not take into account operating expenses, maintenance and repairs, and similar factors that would be deducted to arrive at actual profits.²²⁷ In fact, a profit and loss statement for the ARCTURUS reflects that for the January 2016 through August 2017 time period, the ARCTURUS reported negative net income.²²⁸ In addition, Key applied an 80% utilization rate, which he arrived at by averaging the rate over the six to seven months before

²²⁶ Paragon's and Signet's Revised Stipulations of Fact as to Their Contentions Regarding Damages (Doc. 392, 7).

²²⁷ Key Dep., 114–115, S.Ex.333 (Doc. 431-4).

²²⁸ Confidential Signet Revenues and Utilization Memo, Signet Ex. 289 (432-10, 4).

Hurricane Harvey.²²⁹ But calculating an average over a longer time period would have reduced the utilization rate.²³⁰ And Key acknowledged that the Port of Ingleside experienced “slow starting up” after Hurricane Harvey, strongly suggesting that in the months after the storm, Signet would not have realized the same utilization rate for the ARCTURUS that it experienced before the hurricane.²³¹

Ultimately, the evidence on which Signet relies does not demonstrate that the company lost \$755,467.31 in profits from loss of charter hire for the ARCTURUS. On the contrary, the record supports the conclusion that any profits would have been significantly lower, and may have proven fully elusive in the dampened market in the months after Hurricane Harvey. As a result, the Court concludes that Signet is not entitled to any damages for loss of charter hire.

4. Indemnity

Signet argues that under the Tariff, Paragon possesses a contractual obligation to indemnify Signet for any damages arising from the services provided under that contract. In particular, Section 16 of the Tariff specified that “Owners [Paragon] agree to indemnify Signet Group from and against third party liabilities arising out of this agreement not covered by the other indemnity provisions of this Tariff, but only to the extent of the negligence or other fault of the Owners Group.”²³²

“The interpretation of an indemnity provision in a maritime contract is ordinarily governed by federal maritime law rather than by state law.” *Corbitt v. Diamond M. Drilling Co.*, 654 F.2d 329, 332 (5th Cir. 1981); see also *Channette v. Neches Gulf Marine, Inc.*, 440 F. App’x 258 (5th Cir. 2011). An indemnity provision should be construed to cover “all losses, damages, or liabilities which reasonably appear to have been within the contemplation of the parties.” *Corbitt*, 654 F.2d at 333.

²²⁹ *Id.*

²³⁰ *Id.* (reflecting a 65% utilization rate for the January 2016 through August 2017 period).

²³¹ Key Dep., 117:4–5, S.Ex.333 (Doc. 431-4).

²³² 2016 *Signet Ingleside Tariff*, Section 16, S.Ex.1 (Doc. 414, 8)

Based on a straightforward application of Section 16 of the Tariff, Signet is entitled to contractual indemnification from Paragon for any damages that Signet has paid related to the Noble semisubmersible oil rigs. The Court has concluded that Paragon's negligence proximately caused those damages in full.

In addition, the Court has found Signet responsible for only 50% of the damages to the University of Texas research pier. To the extent that Signet has incurred liability beyond 50% of those damages, Signet is entitled to contractual indemnity from Paragon for that amount.

IV. Conclusion

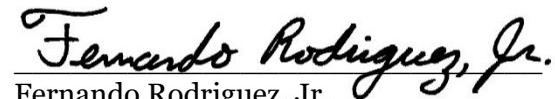
The Court bases the preceding findings of fact and conclusions of law on the trial record and the applicable law. As explained in this Opinion, Paragon bears sole responsibility for the initial breakaway of the DPDS1 from the Gulf Copper dock, and is liable for the damages that resulted in the immediate aftermath of that event. The damaged vessels and structures include the DPDS1 itself, the Gulf Copper dock, the Signet tug boats ENTERPRISE and ARCTURUS, and the Noble semisubmersible oil rigs DANNY ADKINS and JIM DAY. As to the ENTERPRISE, Signet may recover \$1,735,607.78 for wreck removal services, \$41,412.17 for surveyor expenses, and \$3,600,000 as the fair market value of the vessel at the time of casualty. As to the ARCTURUS, Signet may recover \$1,517,311.08 in repair costs, \$37,055.74 in salvage costs, and \$54,225.74 for surveyor expenses.

The subsequent allision with the University of Texas research pier represents a separate incident that both Paragon and Signet could have avoided. Each party bears 50% responsibility for the resulting damages to the research pier.

As to each of these two incidents, Signet's Ingleside Tariff governed as to the services that the tug boats provided.

The Court reaches no findings on the issue of recoverable attorney's fees and costs, or on the recoverability and rate of pre- and post-judgment interest. The Court will consider these issues in subsequent proceedings in this consolidated action before entering a final judgment.

Signed on March 31, 2022.


Fernando Rodriguez, Jr.
United States District Judge